

**COMPARING PUBLIC POLICIES IN MULTILEVEL
GOVERNANCE SYSTEMS:
TOBACCO CONTROL IN THE EUROPEAN UNION**

A Dissertation

by

HOLLY THOMPSON GOERDEL

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2007

Major Subject: Political Science

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Approved by:

Chair of Committee, Kenneth J. Meier
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ABSTRACT

Comparing Public Policies in Multilevel Governance Systems:

Tobacco Control in the European Union. (May 2007)

Holly Thompson Goerdel, B.S., Texas A&M University

Chair of Advisory Committee: Dr. Kenneth J. Meier

This is a comprehensive study of tobacco control policy and politics in the European Union, 1970-2000. I develop an instrumental theory of public policy which establishes an approach for connecting policy instruments to policy outcomes. I investigate ways in which political, bureaucratic and interest group (particularly the tobacco industry) factors influence the success of policy instruments aimed at reducing cigarette consumption. I also explore whether and how supranational mandates and directives influence the success of national-level efforts to control tobacco. I test hypotheses empirically using pooled time-series methodologies.

The substantive conclusion is that non-price policies are only a qualified success when controlling for addiction, price policy and factors in the policy environment. Price policy is consistently effective, cross-nationally and the public health bureaucracy is a key player in curbing consumption of cigarettes. Major theoretical conclusions include affirmation that supranational policy actions can shape national policy outcomes, that interest group pluralism favors those with a comparative advantage in organizing (in this

case, the tobacco industry), and that while policy instruments can be evaluated according to their behavioral attributes, caution should be exercised when simultaneous policy adoption is occurring.

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I credit the completion of this project to the guidance and support from a number of very special people including my advisor, committee, spouse, friends, and numerous colleagues. Ken Meier stands out as exceptional for many reasons. As my advisor he inspired fear and aptitude. Few mentors can traverse that space well; Ken is one of them. Most importantly, Ken has imparted a passion for intellectual rigor and provocation.

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My personal acknowledgements begin with the love of my life, Thomas. It takes a special partner to support someone completing a dissertation. Thomas supplied strength, patience, laughter, and wine – always at the perfect time and proportion. I am

exceptionally blessed to have him in my life. I am also grateful to Brandy Durham and Dunia Andary for their love and encouragement for seeing this through. I am energized by them and I am constantly inspired by their vibrant personalities and intellect. There were many times this project benefited from taking breaks where these two had me laughing to tears. I would be lost without them.

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NOMENCLATURE

CAC	Command and Control policy instruments
ENSP	European Network for Smoking Prevention
EU	European Union
FCTC	Framework Convention on Tobacco Control
ISO	International Organization for Standardization
SEM	Single European Market
SPM	Supranational Policy Mandate
TEC	Treaty Establishing the European Community
TEU	Treaty on European Union

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CHAPTER I

INTRODUCTION

Tobacco Control in the European Union

Over the past thirty years tobacco consumption and control have been of political, social and economic interest. Across the developed world, considerable political conflict over tobacco control has been generated regarding regulation, taxation, consumer protection, and public health (Studlar, 2002). Cigarettes have become the target of national sin-tax policies, production and manufacturing of tobacco has been under scrutiny, and there has been an increase in the distribution of scientific information linking tobacco consumption with numerous health conditions, including several cancers ending in death (for example, 1964 U.S. Surgeon General's Report and numerous European white papers between 1995-2005). Socially, cigarette smoking has been labeled a nuisance among patrons of private establishments as well as by employees and visitors of public venues such as parks, trains and government buildings. The result has been an explosion of policies to govern the harmful effects of environmental tobacco smoke (ETS) in social environments, both public and private.

These developments have changed the political and social discourse surrounding

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state regulation of harmful commodities which put public health at risk. Specifically, they have given rise to comprehensive plans of action to curb smoking, in particular, across the European Union. These plans have both member state and supranational origins.

A number of commissioned studies from international organizations (e.g., the World Health Organization and the World Trade Organization) have also been catalysts for igniting discourse on measures for reducing smoking among various target populations. Their efforts include outlining proposals for abolishing tobacco advertising and promotion, altering public attitudes towards smoking, preventing tobacco smuggling, and supporting research on the harmful effects of tobacco smoke (European Ministerial Conference, 2002; European Commission on Public Health, 2006). For these reasons tobacco politics remains highly salient to citizens, politicians and those in the tobacco industry across Europe.

From a public health and economics perspective, the expanding list and incidence of tobacco-related cancers and diseases across Europe in the last three decades also add to existing fiscal healthcare costs facing over-extended, traditional welfare states. These pressures provide another impetus for member state governments across the European Union to engage in regulating tobacco as an addictive, dangerous commodity. Many of these control efforts require collaborative action between multiple levels of government, local businesses, and mass publics for successful adoption, implementation, and compliance. These are reasons why tobacco control has political and policy significance.

Purpose of Project

The purpose of this project is to examine the politics of tobacco, expressed through public policy, to understand why certain interventions work better than others in curbing the tobacco epidemic. I use a combination of three research approaches commonly employed in policy studies: substantive policy area analysis, quantitative historical (over-time) analysis, and quantitative cross-sectional analysis. The project is comparative, focusing on cross-national policy effectiveness in member states of the European Union. The focus on European Union develops implications of regulating tobacco in a multilevel governance environment. I develop an instrumental theory of policy effectiveness to gauge the comparative impact of tobacco control efforts. Analyses are both descriptive and prescriptive in nature.

I begin the project in Chapter I by situating my research against the policy problem of tobacco consumption. I discuss how the combination of policy research approaches can be applied to this policy problem. In Chapter II I establish how to study tobacco policy effectiveness from an instrumental view, drawing on three bodies of literature: regulatory policy effectiveness, tools of government action, and frameworks of policy typology. I develop conceptual clarity as to how tobacco control interventions can be classified according to type and behavioral attributes. Chapter III examines government action on tobacco control from 1970-2000 across fifteen countries in the European Union: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Portugal, Spain, Sweden, Netherlands, and the United Kingdom. I add to this historical account empirical evidence in support of how tobacco

policy instruments often converge on common underlying notions of command-control regulation and incentive-based interventions which rely on quality information.

Using a historical perspective, I catalog 1) the adoption of tobacco legislation and 2) the use of individual policy instruments within each legislative occurrence, for all member states. This descriptive analysis also illustrates how the inventory of common instruments (policy scope) has expanded over time. Chapter IV is a quantitative analysis of the effectiveness of both individual and multiple policy instruments at the member state level. Policy is generally envisaged as a governance mechanism, and an instrumental framework for comparative effectiveness is applied to testing hypotheses concerning how policy outcomes respond to various policy efforts when the policy environment (bureaucratic, political, interest group and contextual factors) is considered. Finally, I evaluate whether policy effectiveness remains robust to strategic positioning by prominent actors in the policy environment.

Chapter V extends Chapter IV by empirically testing whether Europeanization plays a role in constraining or enabling tobacco control policies at the national level. Two institutional features of the European Union are identified as critical for policy performance related to tobacco control: 1) the way in which EU tobacco directives are integrated into national law and lead to harmonization across countries 2) the function of policy mandates within a supranational system of policymaking. I supply direct and indirect evidence to support claims of how Europeanization has shaped the tobacco-policy environment at the national level. Finally, Chapter VI offers substantive and

theoretical conclusions articulating the contribution of this project to the study of comparative public policy.

I argue throughout the study that public policy is one expression of the relationship between government and its citizens; it helps negotiate governance between state and society. As such, this study speaks to a larger discourse on democracy and public policy (Schneider and Ingram, 1997; Ingram and Mann, 1980), especially policy effectiveness. An instrumental theory of policy effectiveness inherently values policy performance – holding government accountable for gains and losses associated with policies and programs being pursued. This is the force behind considering policy *outcomes* as the dependent variable of interest throughout the study. Furthermore, the selection among policy instruments and the complex political economies surrounding subsequent policy systems may have implications for broader democratic governance. Concentrating on the regulation of tobacco across Europe is a gateway to confront these larger questions and concerns over the role of policy in facilitating democracy in the modern state.

Policy Problem

The problem of tobacco consumption is multifaceted. National and regional anti-tobacco movements have increased their presence across Europe, industry alliances have become organized and powerful and normative concerns over the taxation of cigarettes to generate government revenues have surfaced. Progressive, pro-health interest groups have undertaken efforts to overwhelm positive images of smoking by injecting counter-

campaigns which tout the harmful health effects of tobacco consumption of any kind, but especially smoking (World Health Organization, 1997). As expected, the tobacco industry has responded using direct and indirect means to influence policymakers, including forging alliances with member states who are amenable to preserving industry-rights to grow, produce, manufacture, and sell tobacco products for maximum profit (Germany, as example) (Aspect Consortium, 2004) . These alliances have influenced the degree to which national tobacco policies constrain their actions. They have also reinforced the determination of the tobacco industry to become highly integrated into the policymaking process. These activities are part of a larger global strategy to expand tobacco-markets in those directions with least regulatory resistance (e.g., Central Europe and East Europe, East/South East Asia). With the support of legislation providing legal grounds for costly litigation in the United States, those in the industry are also protecting their interests against such a fate in Europe and in markets reaching the developed world (Rabin, 2001).

More generally, economic consequences of controlling tobacco, as well as citizen and industry responses to regulation, face political actors to various degrees, cross-nationally. Policymakers at all levels are making crucial decisions on the level of national-commitment towards intervening in the marketplace when public health is at risk (Meier and Licari, 1998). At the least, there is a rising consciousness of the importance of controlling tobacco, especially cigarettes, in the minds of decision makers. At the most, the result is a rise in tobacco control generally and an overall expansion of

tools used by government to change the initiation and consumption behavior of target populations (for example, taxation, information, and command-control tools).

Another facet of the policy problem deals with the complexity of economic, health, and psychological determinants of cigarette smoking. The demand for cigarettes has become increasingly inelastic to price increases due to its addictive qualities (Licari, 2000). This has made cigarette taxation attractive as a source of governance revenue, but has sent mixed signals to the public as to whether these actions are exploitive in nature. It is questionable whether these policies are pro-health and whether they disadvantage poorer segments of the consumption population, who typically have limited access to cessation treatments. Finally, tobacco consumption has been historically socially-constructed as acceptable in some time periods, like most of the twentieth century and during wartimes, and as increasingly unacceptable in others, such as the post-1964 *Surgeon General's Report* era (Rabin, 2001). Decoupling tobacco control policy from evolving social constructions of cigarette smoking is not reasonable. Any contemporary study of policy effectiveness in this arena should acknowledge this shifting context, as it helps illuminate the present focus on improving public health.

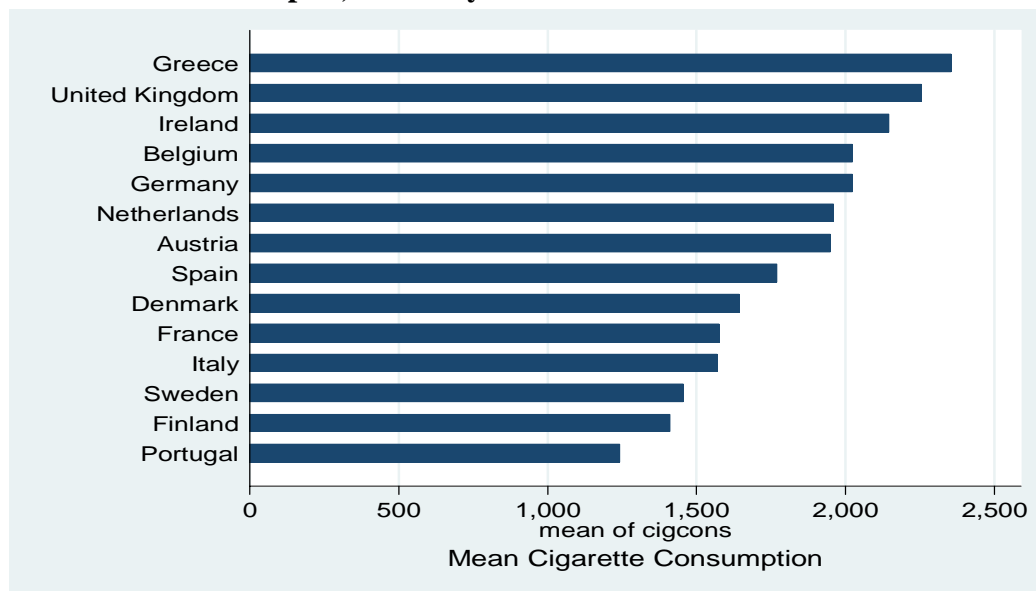
The concern over public health is especially poignant for European states with large social welfare dependencies. This concern is exacerbated by the half million European Union citizens who die due to tobacco-related illness every year, and more than triple that amount who suffer from tobacco-related diseases (Aspect Consortium, 2004). Despite these statistics, policy actions did not begin taking shape through legislation until the mid 1980s and early 1990s at the member state level. Initiation of

tobacco control from the supranational level did not commence until 1989. The first formal authoritative mandate to control tobacco consumption was introduced in the Treaty of European Union (TEU). This document was the first official coordinated effort outlining a commitment to protect the health and safety of European Union citizens by engaging in tobacco control, with the primary goal of curbing consumption of products resulting in adverse health effects, or death.

Cigarette Consumption in Europe 1970-2000

Focusing on tobacco control across member states provides a great deal of variation in tobacco consumption and tobacco control policies. Figure 1 illustrates mean cigarette consumption (number of cigarettes per capita, annually) across Europe during the decade 1970-1980, by country. The overall range of cigarettes consumed across each European country during this decade is between 1250 (Portugal) and 2400 (Greece) cigarettes per capita, annually. Greece, the United Kingdom, and Ireland are Europe's highest cigarette consumers, while Sweden, Finland, and Portugal consume, on average, one thousand less cigarettes per person than the three consumption leaders. Overall cigarette consumption (mean consumption) in European countries is approximately 1300 cigarettes per person, annually, in the decade of 1970-1980.

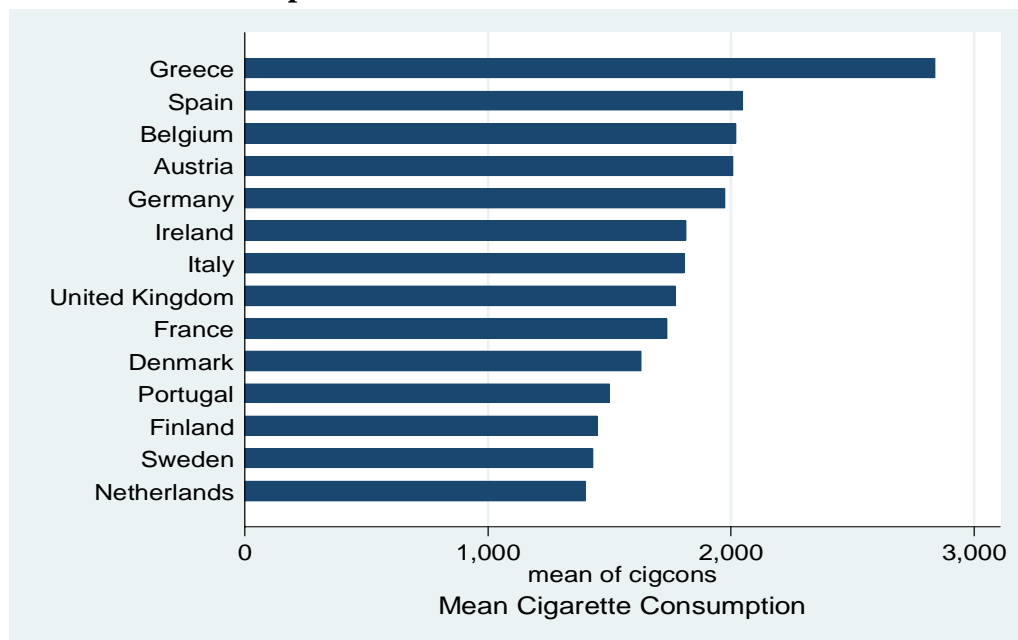
FIGURE 1 Average European Cigarette Consumption, Number of Cigarettes Per Capita, Annually: 1970-1980



Source: World Health Organization – Health for All Database (2004).

In the decade of 1980-1990, Figure 2 demonstrates that overall consumption (mean consumption) across European countries rises to approximately 1700 cigarettes per capita, annually, from the previous decade. Also, the overall range of consumption across Europe widens to between 1300 per person (Netherlands) to 3000 (Greece). The United Kingdom and Ireland are replaced by Spain and Belgium as European consumption leaders, per capita. Finland and Sweden, however, remain the lowest European cigarette consumers.

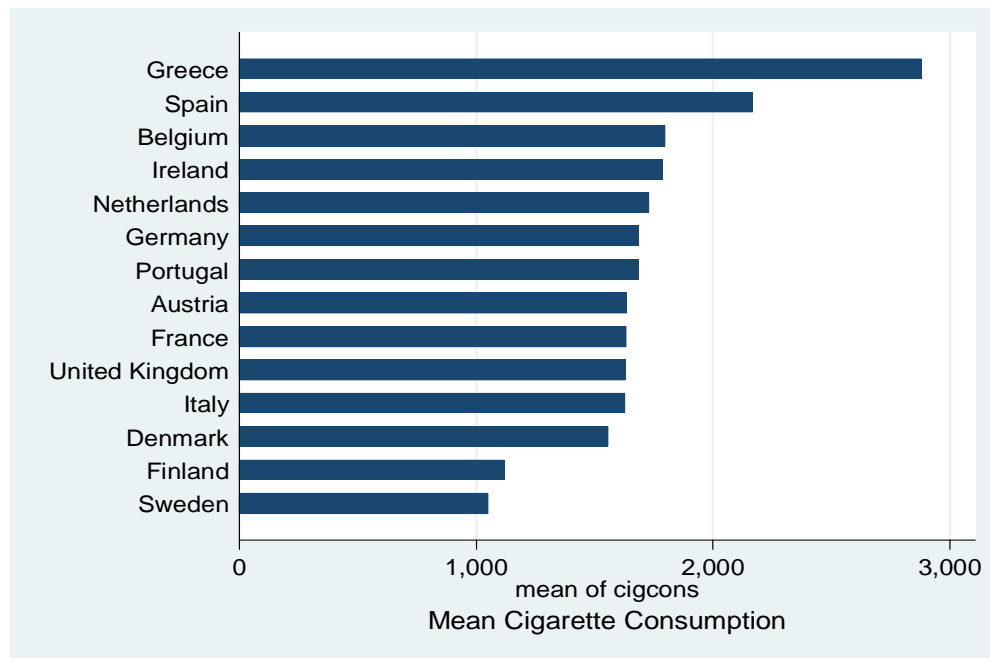
FIGURE 2 Average European Cigarette Consumption, Number of Cigarettes Per Capita: 1980-1990



Source: World Health Organization – Health for All Database (2004).

Figure 3 demonstrates how average cigarette consumption varies for many European states compared to the previous decade, with some countries reporting substantial decreases in consumption (Sweden, Finland, Belgium, and Italy), while others report increases (Spain and Netherlands) or stationary levels (Austria, France, United Kingdom, and Denmark) of cigarette consumption per capita.

FIGURE 3 Average European Cigarette Consumption, Number of Cigarettes Per Capita: 1990-2000



Source: World Health Organization – Health for All Database (2004).

Taken together these figures demonstrate how cigarette consumption varies across both time and space in Europe from 1970-2000. I explain this variation using measures of different policy instruments, as well as relevant factors in the policy environment.

Finally, political scientists care about this policy issue for a number of reasons. Tobacco control activities are among the first non-economic regulatory efforts by the European Union towards mixed social-regulatory arenas. This progression corresponds with goals introduced in the Treaty on European Union (1992), which introduced

guiding principles and operating rules to achieve economic, political, *and* social union. Secondly, even with mounting studies linking adverse health consequences to smoking over the past two decades, it remains unclear how tobacco can be controlled. This raises salient political questions as to the purpose and effectiveness of various tobacco control policies across member states and at the supranational level, over time.

Research Orientation for Tobacco Control

Substantive Case Study

This dissertation combines three research approaches to investigate the effectiveness of tobacco control policy in the European Union: substantive case study, quantitative historical analysis, and cross-sectional analysis. Taken together, these approaches inform a comprehensive model of comparative public policy which can be exported from the tobacco-health arena to other hybrid, social-regulatory policy areas, including regulating the environment, family planning, stem-cell research, and nuclear waste disposal. Hybrid regulatory areas, such as these, inherently require attention to both social and economic concerns by policymakers. This dual-feature is often what makes them politically salient (Durant and Legge 1993).

By focusing on tobacco control as a substantive policy arena, I am able to answer three important questions: 1) how can tobacco policy instruments be identified, categorized, and analyzed? 2) which factors in the policy environment enable or constrain the success of individual and multiple policy efforts? 3) how, and to what

extent is policy performance contingent on factors associated with multilevel governance?

The first question introduces the theoretical orientation of the project, which is based on an instrumental view of public policy. Identification and categorization of policy instruments shape the foundation of this perspective. First I develop a strategy for identifying tobacco policies. Across Europe, tobacco policy activities typically have their origins in national policy initiatives. Therefore, I rely on national legislative action to identify policies. Secondly, I draw on the policy tools literature (Salamon, 2002; Schneider and Ingram, 1990; Meier and Licari, 1998; Studlar, 2002) to categorize instruments of tobacco control evident across national legislation, according to whether they focus on advertising restrictions, taxation of tobacco products, and/or regulation of environmental tobacco smoke, for example. These categories are refined further according to their attributes – whether they are command-and-control in nature, incentive-based, or designed to correct information asymmetries in the market. Ultimately, an instrumental perspective a) improves the exercise of comparing policies, cross-nationally and b) supplies expectations of potential relationships between policies and outcomes, in the form of testable hypotheses.

This information can then be used to address the second question: which factors in the policy environment enable or constrain the success of individual and multiple policy efforts? This question raises three main points relative to the study of public policy: First, evaluating *individual* policy effectiveness is only useful to the extent that no other policies exist targeting the same outcome. Secondly, since we rarely observe

such an occurrence in the context of tobacco control, the effectiveness of any particular policy must be considered in light of the existing regulatory context (Durant and Legge 1993). An instrumental approach takes into consideration both the effectiveness of any single policy, warning labels on cigarettes or advertising bans for tobacco, in light of existing policies or simultaneously-adopted policies. Thirdly, identifying relevant factors in the policy environment is important for understanding how effectiveness is either constrained or enabled by bureaucratic, political, interest group, and robust-contextual factors.

In addition to these, macro-structural factors which fundamentally change policy development and implementation should be considered, including an examination of how policy performance is affected by supranational features arising from the multilevel governance arrangement of the European Union. These features include the extent to which integration forces lead to policy convergence across member states, as well as how supranational directives are incorporated into national policies. The way in which member states integrate directives into national legislation, for example, can have demonstrable effects on policy outcomes (Knill and Lehmkuhl, 2002). Establishing incentives for member state compliance at the supranational level, as well as instituting standards of suprastate-commitment to certain policy imperatives may also have implications for policy performance across the EU. These types of issues should be considered when gauging how Europe matters to policy performance in the EU system writ large.

Answers to these questions provide the foundation for a more generalizable, comprehensive, and comparative approach to evaluating policy performance in a system of multilevel governance. The substantive policy arena of tobacco control is also appropriate for exploring these questions like these, generally, due to the prevalence of tobacco consumption, and its subsequent control, across every level of government in the European Union and around the world.

Quantitative Historical Analysis

The second research approach is quantitative historical analysis. This approach provides a way to think about the influence of time and space when determining the effectiveness of public policy. Social regulatory policies are interventions. These interventions can represent new, innovative actions, the reinforcement of past actions, or the rescinding of policy activities from the legislative docket. The only chance of capturing these dynamics, and how they influence outcomes, is to look at their occurrence over time. Tracking new policy interventions while also accounting for the continuation of existing policy requires a historical investigation. Having a dataset with an over-time dimension provides the necessary mechanism for disentangling those factors which influence policy outcomes and it captures the dynamic nature of policy effectiveness.

Taken together, the first two research approaches bring one closer to a theoretical and empirical understanding of *how* to compare public policy and gauge overall

effectiveness. To explain why tobacco control works in some instances and not others, a third stream of analysis is needed: quantitative cross-sectional analysis.

Quantitative Cross-Sectional Analysis

It is especially important to consider cross-sectional variation when studying public policy. Cross-sectional analysis of countries which share a historical context and similar attributes allows for leverage in exploring the relative impact of factors which are likely to vary across space, such as bureaucratic, political, interest group, and robust-contextual factors relevant to controlling tobacco. Quantitative cross-sectional analysis in tobacco control is limited to U.S. states and some U.S. cities (Shipan and Volden, 2006; Meier and Licari, 1998), as well as across several OECD countries (Licari, 2000). The field is wide-open for analyzing member states of the European Union.

Taken together, these three research approaches provide an anchor for the investigation of research questions throughout the dissertation. While each approach is individually important, a comprehensive strategy utilizing all three is necessary for better grasping the effectiveness of tobacco control in European Union. The first step in implementing this strategy is to show how my research combines with and contributes to existing tobacco control studies in the literature.

CHAPTER II

RESEARCH ORIENTATION FOR TOBACCO CONTROL

Tobacco Control in the Literature

The political significance of tobacco control has been expressed a number of ways in the literature. Tobacco control studies in political science address a number of different research questions and utilize a variety of theories. Most research focuses on the United States as a case, with limited attention to comparative U.S. states (Licari, 1997; Meier and Licari, 1998). More recently, qualitative comparative research has been conducted on tobacco control at the U.S. state-level and Canadian provincial-level (see Studlar, 2002). In this study, federalism, policy transfer, and interest group factors influence adoption patterns of tobacco policy at the sub national and federal levels of government. Less attention has been paid to cross-national comparisons outside of these cases and it is rare to find a discussion on policy outcomes, rather than policy outputs. These deficiencies in the literature are addressed in this dissertation.

There are two main political orientations to the study of tobacco control. The first deals with political input processes in policymaking. This research focuses on the following question: What determines tobacco control policy? The level of analysis is often federal, but in some cases reaches to the sub national level. Four theoretical approaches are used to explain tobacco control policy: agenda-setting theory, interest

group/social movement theory, theories of partisanship and ideology, and political institutions.

Agenda-Setting and Tobacco Control

The main contribution of research using agenda-setting theory to explain tobacco control policy is its ability to clarify difficulties associated with defining the “tobacco-problem” over the years. Agenda-setting theory is used to explain why governments act as they do on policy issues (Studlar, 2002). Baumgartner and Jones (1993) find their agenda setting theory explains tobacco control policy over time via the changing policy subsystem, dynamic problem definition, and role of policy entrepreneurs (see also Spill, Licari, and Ray, 2001). Other agenda setting studies suggest that non governmental experts and public health social movements have moved tobacco policy onto the political agenda using outside initiatives (Cobb, Keith-Ross, and Ross, 1976). This observation is consistent with efforts made by public health interest groups to demand a more pluralist approach to curbing the tobacco epidemic – as opposed to the traditionally elitist initiatives coming from government officials who are often economically and politically connected to pro-tobacco communities (Cobb and Elder, 1972; Downs, 1972; Studlar, 2002). Despite these efforts the tobacco industry still exercises a great deal of influence in many political decision making spheres. This is due in part to the long-standing comparative advantage they maintain with organizing in pluralist systems of governance versus other anti-tobacco groups.

The agenda setting approach also emphasizes the role of entrepreneurial politics (Wilson, 1990), where “politically ambitious or morally committed leaders employ

modern techniques of mass communication to propose measures in the public interest, reframing the way in which social problems are perceived and talked about” (Rabin and Sugarman, 2001 p. 13). In tobacco politics, this tactic has proven to be essential to the movement of tobacco concerns from the informal to the formal, systemic policy agenda, at the federal level in the United States (Baumgartner and Jones, 1993). This strategy has helped foster a litigation environment in the U.S. that is hostile towards the tobacco industry. These developments provide rather strong incentives for tobacco companies to seek markets elsewhere, particularly in areas with the least regulatory constraint and more favorable litigation atmosphere.

Comparative research on tobacco politics between the U.S. and Canada constructs a division of historical periods useful for examining tobacco control policy (Studlar, 2001). This is a useful heuristic which gives context to policy discussions and also incorporates important historical information unique to the units of analysis under observation. I use this strategy to help build a case for supranational influence over national tobacco consumption outcomes. Despite contributions made by agenda-setting theory to tobacco control, few applications of the theory have been linked to policy performance (Gilmore and McKee, 2004; Rabin and Sugarman, 2001; Studlar, 2001).

Social Movements, Interest Group Conflict, and Tobacco Control

The second theoretical approach within the political input-process orientation deals with social movements and interest groups. This literature burgeoned in response to efforts by public health advocates to organize themselves into a more active

relationship with government. One goal of this movement in U.S. and Canadian cases was to break apart robust policy subsystems build around the tobacco industry and its protection. The idea was to use collective action to promote more pluralist, pro-health support while simultaneously weakening pro-tobacco elitism.

The outside-initiative exercised by interest groups and social movements began to contend with long-standing paths of influence secured by the tobacco industry within critical spheres of policymaking. Nathanson (1999), for example, demonstrates how social movements act as catalysts for changes in smoking policy . Building on previous research Nathanson argues that policy success attributed to health-related social movements coincide with credible social and scientific threats to public health, the ability to mobilize a diverse, organized constituency, and the convergence of political opportunities with target vulnerabilities. The presence of such factors bolsters policy change in a direction towards public health protection and away from tobacco and agricultural protectionism.

Similar to groups in the environmental movement, anti-tobacco interest groups share a normative commitment to protect public health while offering their expertise and competency to policy entrepreneurs with respect to scientific and social information (Baumgartner and Jones, 1993). In the U.S. , policy entrepreneurs played a key role in representing anti-tobacco interest groups as epistemic communities to key policy makers (Wilson, 1990; Hays, 1996), emphasizing how the tobacco-problem should be reframed according to risks associated with cancer, disease and second-hand smoke (Rabin and Sugarman, 2001). These actions are commonly reflected in policy outputs over time.

Generally, interest group and social movement perspectives consider tobacco control an area stimulated by attentive subsets of the public, whether they are interest groups, social movements, or advocacy coalitions (Studlar, 2002). Explanations of tobacco policy using interest group and social movement theory emphasize the dynamic goals of groups, their relative power to alternative interests, and their formal institutional connectivity which is most likely through a policy subsystem. Missing from this perspective is the role played by institutions in shaping interest-group integration into national policymaking processes. I address this deficiency while also linking institutional features to policy outcomes.

Partisanship, Ideology and Tobacco Control

Another perspective taken by political scientists to explain tobacco policy deals specifically with political elites and their partisanship and ideology. Tobacco control is not typically considered a high-politics issue (Studlar, 2002). Most politicians do not incorporate a stance on tobacco issues in their formal policy statements when campaigning and political parties do not customarily include such stances in their party platforms. Cross-national comparisons between the U.S. and Canada reveal that no political parties have made tobacco control a major electoral issue (Studlar, 2002). As such, most partisan and ideological conflict over tobacco issues is likely to occur in the policy subsystem environment rather than the political forefront. Exceptions are firmly grounded in historical context. For example, the rise in tobacco-related litigation at the U.S. state-level is partially attributed to attorneys general partisan identification and

ideological leanings. Spill, Licari, and Ray (2001) find systematic evidence that Democratic attorneys general are more likely to file lawsuits against the tobacco industry than their Republican counterparts. The explanation for this relies on understanding the historical link between tobacco issues and political party support by the tobacco industry in the United States.

In a comparative context, it is possible to imagine how any stance taken by a political party on tobacco issues might be strongly reinforced by features of party discipline and accountability that often exist in parliamentary systems of government. Political parties, however, rarely take such stances and when they do it is difficult to attribute their position to general partisanship and ideology (Studlar 2002).

Political Institutions and Tobacco Control

A more promising approach to explaining tobacco control policies across space and time involves political institutions. Institutional theory is used to explain tobacco policies by focusing on how governmental rules of the game influence policy output. This primarily includes the way government is structured and how policy is decided (Studlar, 2002). This approach also permeates agenda setting and social movement theories, by structuring the way factors inside and outside government influence tobacco control and policy change.

In western developed democracies, qualitative evidence suggests that tobacco policymaking, specifically, occurs at the legislative, executive, judiciary, and bureaucratic levels of government (Aspect Consortium 2004). For scholars searching for

explanatory factors of tobacco policy output, this is a relatively unexplored area in the European context. This is surprising given the rich structural variation across national governments within the European Union. Points of variation relevant to tobacco control are the organization of legislative and executive systems, the constitutionally defined system of power between institutional bodies (Kagan and Vogel, 1993; Studlar, 2002), the degree of horizontal and vertical fragmentation of political activities, bureaucratic policymaking and enforcement styles (Weaver and Rockman, 1993), and the organization of court systems.

Institutional theory is also relevant for establishing how interest groups are linked to government and policymaking. This particular linkage is important since the tobacco industry and anti-tobacco movements have had varying degrees of interaction with governmental units over time which may produce varying results for policy performance.

Tobacco constituencies are also connected to governments in various ways. In some countries certain institutional bodies are more connected to the tobacco industry or public health movement than others. These differences are likely to influence the shape of tobacco control legislation. Studlar (2002) provides a comparative case of this theoretical expectation:

“In Canada, once tobacco control is placed on the formal parliamentary agenda, any legislation or budget proposals are highly likely to pass in a form closely resembling the original unless the Cabinet chooses to accept changes or allow the bill to die. Thus policy responsibility is clearly in the executive even though the tobacco constituency

linkages of federal MPs are very similar to those in the United States. Twelve percent of the members of the House of Commons had an industry or agriculture presence in their district in 1996, almost identical to the rate in the US House of Representatives (Ashley et al., 1997)...This same institutional responsibility for tobacco-control legislation has been allowed to wither...due to insufficient commitment by the executive of the governing party although it may be influenced by its legislative party caucus behind closed doors. Tobacco company connections to the executive in Canada, less publicly observable...explain [the] tardiness of [restrictive tobacco-control policies] (p. 262).”

Hypotheses generated in this research suggest that an increased tobacco presence (and thus, tobacco constituency) in a country might decrease the likelihood of restrictive policies that harm constituents. I incorporate a test of this hypothesis in Chapter IV. Refocusing the same hypothesis on anti-tobacco constituents is not likely to make sense given their weakness in organizing compared to the tobacco industry (Nathanson, 1999; Licari, 2000).

There is a major shortcoming with applying institutional theories to tobacco control. There is an assumption that general institutional features can be easily and specifically linked with stances on tobacco issues and formation of tobacco policies. These linkages are difficult to track unless the researcher is focusing on a very narrow part of the puzzle. A larger piece of the puzzle is explored in this study. In order to convincingly use institutional theories, I rely on substantive information coming from the policy context, recognizing possible limitations.

Policy Typologies, Diffusion, Instruments and Tobacco Control

The second political orientation to the study of tobacco control progresses from input-policymaking processes (agenda-setting, social movements, interest group conflict, partisanship, ideology, and political institutions) towards explanations of how policy outcomes respond to tobacco control efforts. Systematic investigations of policy outcomes in the literature are less comprehensive, less developed, but extremely fertile as a research area. I contribute to this portion of the literature.

There is growing concern over how responsive target populations are to government action. This concern is based on a number of factors. First, those who are targeted by particular policies may disagree with the instrument of regulation. Some private businesses such as cafés and bars have not been in favor of abrupt, mandatory smoking bans because of how disruptive they are to clientele-expectations and business norms. On the other hand, there has been less resistance towards voluntary bans and phased-efforts to ban smoking because they allow for adjustments over time.

Secondly, the target population may hold a certain preference or attitude towards what is considered acceptable in the arena of government intervention. If there is some distance between attitudes and regulatory efforts, there may be resistance to comply.¹

Thirdly, the target population may not be in position to respond to government action.

¹ I am not able to empirically investigate the role of public opinion in tobacco control given data limitations. However, I do incorporate qualitative information relevant to this concern throughout the study where appropriate.

Given that many tobacco products contain nicotine, addiction plays an important role in whether someone is able to adjust their consumption, despite government regulation.

All of these factors may influence the success of government action directed towards reducing consumption of tobacco products. They can also be linked to three theoretical perspectives used to explain policy outcomes: policy typology, policy diffusion, and policy instrument theory.

Policy typologies are somewhat descriptive in nature, but can also give rise to theoretical expectations linked to outcomes. For example, policies adopted by legislatures have long been divided into three major types: regulatory, distributive and redistributive (Lowi, 1964). These typologies “differentiate policies by their effect on society and the relationships among those involved in policy formation” (Anderson, 2000).²

Regulatory policies limit the discretion to act of the regulated by imposing restrictions or limitations on certain behavior (Mitnik, 1980). Regulatory efforts are inclusive of general guidelines that are often expanded into specific actions. Lowi (1972) argues that regulatory policies are successful depending on whether government coercion is remote or immediate and whether a distinctive pattern of pluralist participation allows for appropriate management of policy. Command-control policies, such as restrictions on cigarette ingredients represent an example of ‘immediate

² Policy typologies become linked to outcomes when there is a focus on differentiating policies by their effect on society.

coercion'. These policies specify sanctions or penalties for noncompliance and establish oversight capabilities.

Distributive policies are “government efforts to distribute benefits to some portion of the population and pay for those benefits from general tax revenues rather than with user fees” (Meier, 1993). Lowi (1972) contends that distributive policies, especially subsidies, transfer a more remote likelihood of government coercion. The coercive element of subsidies is indirect or is displaced onto the general revenue system. On the other hand, distributive policies can promote patterns of elite participation in the policymaking process, leading to capture by the regulated (Lowi, 1972). This argument is salient in the evolution of tobacco control in Canada and the U.S. The promotional phase of tobacco control in these contexts was distributive in nature. During this time, governments allocated subsidies to tobacco agriculture and refrained from creating restrictive policies on manufacturing and consumption (Studlar, 2002). This era of distributive policymaking helped forge a culture of government support for tobacco that has been difficult to penetrate as time continues. These developments can be applied reasonably well in Europe, especially given extensive national and supranational (e.g., CAP subsidy programs) commitments to certain agricultural commodities, including tobacco in places like France, England, Germany and Greece.

Redistributive policies are more likely to incite political conflict. In redistributive policy the government provides benefits for a portion of the population and requires another group to pay for these benefits (Anderson, 2000; Meier, 1993). These policies reallocate money, rights, power or values (Anderson, 2000). A recent trend in tobacco

taxation reflects how redistributive policies can work in large welfare states. Across several European countries more than fifty percent of the price of a pack of cigarettes is actually taxation of some kind (Chaloupka and Warner, 1999). Many of these same countries are developing specific outlay accounts for these tobacco taxes which are designed for recuperation of past and on-going health care costs related to the management of smoking-related diseases among their citizens (Aspect Consortium, 2004). These actions reflect the reallocation of resources from cigarette consumers to the state for the purpose of relieving the health care burden. These actions may be more symbolic than pragmatic or realistic. There is mixed evidence whether tobacco taxation yields enough revenue to cover such expenses (Chaloupka and Warner, 1999).

All three types of policies (distributive, regulatory, and redistributive) are evident in tobacco control across the United States, Canada, and the European Union.

What do policy typologies contribute to an explanation of cross-national variation in responses to tobacco control? First, the most important contribution is that government intervention into public health and the consumer market place - whether distributive, regulatory, or redistributive – fundamentally changes the basic equation of tobacco consumption equals market-price plus individual choice. With the expansion of tactics used by the tobacco industry both in and out of the political arena to protect their interests, it is necessary for government actions to be *wider* in scope (e.g., regulatory, distributive, *and* redistributive) and *more* severe in nature (i.e., more bans and prohibitions than voluntary agreements) in order to have maximum influence reducing cigarette consumption.

Secondly, policies which provide for more immediate government coercion are likely to be successful in moving outcomes in a favorable direction. Finally, distributive policies may capture the protectionist history between governments and the tobacco industry, while also offering an account of how that history has shaped the way in which the tobacco industry has positioned itself in policymaking processes and larger national economies across European countries. Tobacco consumption may be unlikely to decline under these circumstances.

Policy Diffusion and Tobacco Control. Policy outcomes may also be influenced by the diffusion of policies across time and space.³ There are three reasons intergovernmental diffusion takes place. First, countries learn from one another about what does and does not work. Secondly, there may be motivation to compete with one another on improving outcomes in a particular area. Thirdly, public and political pressures may force the adoption of policies taken by adjacent governments, or those with similar characteristics (Berry and Berry, 1999).

The internal political climate and pressures from the external environment also reveal something about how likely policies are to succeed once they are adopted. For example, policy diffusion and subsequent success is predicated on the need for policy involvement in the first place (Feiock and West, 1993; Ringquist, 1994) the degree of interest group support around the issue (Dye, 1966; Hofferbert, 1974; Erikson et al,

³ Policy diffusion theory also explains policy adoption. The link to outcomes is a result of how policies are adjusted to account for context.

1989; Ringquist, 1994), the extent to which public and political support is present (Berry and Berry, 1999), and the amount of implementation resources available for a given intervention (Jacoby and Schneider, 2001; Daley and Garand, 2005).

Policy diffusion between member states in the European Union is typically based on a voluntary mode of governance centered on persuasion (Bulmer and Padgett 2005). More coercive variants of policy diffusion apply to decisions negotiated between member states and supranational institutions, especially those dealing with policy competencies covered in major treaties (Nugent 2001; Bomberg and Peterson 1999). While I cannot create a valid measure capturing policy diffusion of tobacco control across European countries due to data limitations, I am able to export from this literature a number of expectations concerning the types of support necessary for policy success:

- a) *Interest group influence.* There are two main interest groups contending for influence in the tobacco control arena: the tobacco industry and public health groups. Since the tobacco industry is smaller and more organized, they have comparative advantage when competing for influence than more loosely formed public health groups, during the time under investigation (1970-2000). I consider two possible aspects of the interest group environment in shaping tobacco consumption in Europe. First, I speculate outcomes are less favorable in those countries where the tobacco industry has positioned itself as an important contributor to the larger economy. This is based on the assumption that states are not likely to pursue policies that compromise their macro economic position, on any front. If the tobacco industry has established economic reliance between

themselves and the state, it is not likely that policy outcomes will move in the direction of decline since the regulatory environment favors the interests of the tobacco industry.

Secondly, outcomes may be less favorable in those countries where there exist institutions enabling certain interest groups to participate in and exercise influence over policymaking. The tobacco industry is not formally represented in peak organizations of corporatist interest group institutions (Lijphart, 1999) in European countries. Therefore, they rely on more pluralist institutional arrangements for opportunities to exercise influence in policymaking. I speculate policy outcomes are less likely to decline in countries with pluralist interest group structures. This is based on the assumption that the tobacco industry exercises a comparative advantage in organizing given their resources, over other loosely organized groups competing for influence in similar arenas. I explore the following propositions reflecting these considerations:

*Proposition 1a:*⁴ Policy outcomes are unlikely to decline in those countries where the tobacco industry has positioned itself as an important contributor to the larger economy and has established its economic relevance to the government.

⁴ The term “policy outcomes” specifically applies to tobacco consumption in every proposition. When policy outcomes respond favorably this means there is a decline in consumption. If policy outcomes are unlikely to respond favorably this means they do not decline. I prefer to keep the propositions general in nature with respect to language used.

Proposition 1b: Policy outcomes are unlikely to decline in those countries where the tobacco industry has the opportunity to exert influence through pluralist interest-group structures.

- b) *Implementation resources.* Comprehensive tobacco control policies are expensive. They require scientific expertise to form standards of risk and safety, stipulate that oversight be established to monitor compliance in a number of disparate arenas, and they require wide-spread proliferation of information on the dangers of smoking and general tobacco consumption. National bureaucracies, particularly public health bureaucracies, often perform these core functions. While there are other subnational participants involved in portions of these efforts, their contributions are difficult to track.⁵ The public health bureaucracy has the potential to develop and maintain a capacity for responsiveness in the tobacco control arena. Therefore, I focus on the bureaucracy as an implementation resource for controlling tobacco. I explore the following proposition in light of these considerations:

Proposition 2: Policy outcomes are likely to decline in those countries where implementation resources are available to support tobacco control efforts.

⁵ When I track these contributions, in one way or another they typically lead back to governmental transfer of resources from national health bureaucracies.

- c) *Problem Severity and Need-Based Policy.* The core problem with curbing tobacco consumption is the addictive quality of tobacco products, especially cigarettes. Over time, addiction can give way to smoking-related diseases, even death. One way to capture the severity of the addiction problem is through demand elasticity for tobacco products (Chaloupka and Warner, 1999; Meier and Licari, 1998). When consumer demand is unresponsive to changes in price, a degree of addiction is observed. Therefore, habit-persistence plays a key role in determining future consumption. I explore the following proposition in light of this consideration:

Proposition 3: Policy outcomes are unlikely to decline in countries where addiction is more severe.

Propositions 1-3 represent how policy outcomes are contingent on interest group influence, bureaucratic support, and robust-contextual factors.

Policy Instruments and Tobacco Control

Compared to more general typologies of regulatory, distributive and redistributive policies, policy instruments reflect specific strategies for overcoming impediments to policy-relevant action (Schneider and Ingram, 1990). Five broad categories of policy instruments are identified by Schneider and Ingram (1990):

authority, incentives, capacity-building, symbolic and hortatory, and learning. Each makes different assumptions about how policy relevant behavior can be fostered. For example, target populations may not respond to calls for change if they believe the law has not authorized certain actions, the proper incentives to respond are lacking, or the severity of the problem and uncertainty around its solution are unknown. These problems can be curtailed using policy instruments which provide authority, incentives, or methods of learning (Schneider and Ingram, 1990). I investigate the following proposition in light of these considerations:

This approach is used to identify and categorize tobacco control instruments in the literature (Meier and Licari, 1998; Licari, 2000; Pal and Weaver, 2002; Studlar, 2002). In the U.S. context, Meier and Licari (1998) identify command and control regulations, incentives, and information as three prominent and distinct tobacco control instruments. They argue these instruments conceptually subsume those previously proposed in the literature (for example Schneider and Ingram, 1990; Rose-Ackerman, 1995; Eisner, 1993).

Licari (2000) and Pal and Weaver (2002) condense tobacco instruments into three categories that are slightly different than Meier and Licari (1998): command-control regulation, taxation and education. The particular emphasis on taxation by these authors reflects their focus on the role of demand elasticity in frustrating policy efforts towards reducing consumption.

Studlar (2002) is the first to distinguish more carefully among instruments, rather than focus on collapsing categories; in doing so, the complex reality of cross-national

government action on combating tobacco is captured. Five categories of tobacco instruments are regulation, finance, capacity-building, education, and learning tools. These categories also represent instruments introduced by previous scholars, such as Schneider and Ingram's (1990) capacity-building and learning tools, Meier and Licari's (1998) regulation, and Pal and Weaver's (2002) taxation (here, finance). This system of categorization is most appropriate for comparing U.S. and Canadian tobacco control efforts. It is useful as a template for classifying tobacco control policies across the European Union. In Chapter III I identify seven categories of tobacco control instruments that can be organized according to how they overcome impediments to policy-relevant action. These behavioral expectations are drawn from the policy instrument literature, particularly Schneider and Ingram (1990). I explore the following proposition in light of behavioral expectations offered by Schneider and Ingram (1990):

Proposition 4: Policy outcomes are likely to decline in those countries
 where policy instruments overcome impediments to policy-
 relevant action.

This general proposition includes exploration of more specific policy categories, such as command-control policies and those designed to correct information asymmetries and uncertainties. The impact of these instruments on policy outcomes may also be dependent on factors coming for the supranational context.

Most supranational directives in the European Union are anchored by policy mandates outlined in Union treaties. These mandates can influence national policies in three important ways. First, they can establish policy competencies between the EU and member states. This means some policy problems become the exclusive responsibility of individual member states while others require collective action by all member states. Secondly, these mandates create incentives for member state compliance with supranational priorities while also conveying the degree of supranational commitment to improving policy performance in certain economic, political and social arenas (Nugent, 1999). Finally, they can lead to harmonization of policy efforts across member states which can create efficiency-gains in achieving policy goals. I explore the following propositions in light of these considerations:

Proposition 5: Consumption is likely to decline when national efforts to control consumption occur within a supranational context of compliance and commitment to tobacco control, established through policy mandates.

Proposition 6: Supranational mandates may lead to the harmonization of tobacco control policies across member states. Consumption is likely to decline in those countries where efficiency-gains are realized through the harmonization process.

Developing an Instrumental Theory of Public Policy

The purpose of developing and applying an instrumental theory of public policy is to provide explanations for why, and under what circumstances, some policies work better than others in controlling tobacco consumption. The previous section presents four components to this theory. A fifth component is added in this section.

First, a strategy is developed for identifying policies. Three key decisions are made at this level: which functional policy area will be under investigation, which level of government policymaking is most appropriate to target and which expression of public policy (e.g., legislation, judicial decisions or bureaucratic rulemaking) captures the policy activity of interest to the researcher.

Secondly, a theoretical strategy is used for categorizing policies. Policy typologies provide general guidelines for distinguishing among policies. Information from the specific policy context provides another way to group like policies into categories. Thirdly, policies are characterized according to their behavioral attributes. These attributes can be linked to outcomes, depending on whether they are authoritative or command-control, as example. Fourth, the types of support necessary for policy success are assessed. This includes a determination of how policy outcomes are contingent on interest group influence, implementation resources and problem severity.

The fifth component provides a strategy for assessing how policy instruments work in combination. Meier and Licari (1998) provide the only empirical study in tobacco control of how information and price policies work in combination to influence consumption. They develop, test and confirm a formal postulate that the combined

contribution of multiple policies can be less than the sum of individual policy interventions due to different demand elasticities of the target population to which policies are directed. I test this formal postulate in a comparative context and offer another suggestion for analyzing combined policy efforts when the likelihood of simultaneous policy adoption is high.

There are likely a number of policy interventions implemented at the same time, across space. This makes collinearity in the estimation process difficult to overcome. One strategy for reducing potential collinearity among policies while preserving as much behavioral information across instruments as possible is to categorize policies according to price and non-price policy bundles. Non-price policy bundles combine interventions into one measure of policy scope. While some nuanced behavioral information is traded away, the assumption is that the aggregate behavioral quality will enhance policy outcomes as the scope of policy interventions increases. I test this extension of policy effectiveness when instruments are used in combination. There may be implications derived from this strategy for the general application of an instrumental theory of public policy. For example, the theory may need to be applied differently depending on the unit of analysis under observation, whether policies are studied cross-sectionally and whether they are studied over time.

To conclude, Blair (2002) observed that policy tools affect policy outcomes in predictable and regular ways since they represent the blueprint or template that shapes policy. The purpose of developing and applying an instrumental theory of public policy is to provide more specific explanations of these processes. Peters and Van Nispen

(1998, p. 35) add that “the policy world is very crowded and there are already multiple instruments in place. This crowding means that any new intervention will have to contend with, and be coordinated with, a number of other programs engaged in similar and complementary tasks.” An instrumental theory of public policy provides a way for considering these realities in the context of European tobacco control. Finally, this approach also represents a response to Rabin and Sugarman’s (2001) observation that the limited effectiveness of any single tobacco control strategy leads to a subsequent multi-initiative approach to favorably influencing outcomes.

Specific hypotheses are derived from propositions (1-6) coming from this chapter and are tested empirically in Chapters IV and V. New and existing policy efforts, support from the policy environment and supranational factors are linked to policy outcomes by way of an instrumental theory of policy effectiveness. In the next chapter, legislative policy histories of fifteen EU member states are explored, categorized and analyzed as part of the first step in the empirical investigation of how tobacco policy instruments influence policy outcomes.

CHAPTER III

TOBACCO CONTROL EFFORTS ACROSS MEMBER STATES

Chapter I demonstrated that cigarette consumption varies greatly across time and space. Chapter III explores policy explanations for this phenomenon. I present historical information about the types of policy tools used to control tobacco across member states of the European Union. The following descriptions of European tobacco policies indicate which policy instruments are most commonly utilized, how the list of common instruments has expanded over the last thirty years, and how national policy efforts work to comply with European directives for controlling tobacco.

The chapter is organized in the following manner: First, individual policy descriptions are given for each member state, regardless of member status at the time of policy activation. Secondly, the relationship between non-price policy efforts and demand for addictive commodities is articulated. Thirdly, tobacco policies are categorized into a policy instrument framework and principal component analysis is used to empirically investigate whether policies can be separated according to behavioral attributes. The results are applied to empirical investigations in Chapter IV and Chapter V.

Member State Policy Instruments

Tobacco legislation comes from two main sources: the World Health Organization and the European Commissions' Directorate-General for Health and

Consumer Protection. Shafey et al (2003) is an edited tobacco policy reference book and part of the global data initiative of the World Health Organization. Other WHO publications confirm policy legislation reported in Shafey et al (2003). The main contribution of the European Commission is a report by the Aspect Consortium (2004) which is part of the Directorate-General for Health and Consumer Protection for the European Union. This publication also reports the implementation of tobacco policies across member states and the supranational level of government.

Austria: Tobacco Control

Austria began controlling tobacco in February 1979. The Federal Ministry of Health and Environmental Protection proposed the first piece of tobacco legislation, which restricted smoking in hospitals. Health promotion from smoking continued in 1982 with requirements for on-pack warnings. While the warnings were not applicable to point of sale materials, three health warnings were to be used in rotation:

“Smoking damages your health”

“Smoking during pregnancy can damage your child’s health”

“Protect your children from tobacco smoke” (Shafey et al, 2003, p. 445).

Also in 1982, the *Employees’ Protection Law of 1972* was amended by federal law requiring employers to ensure that non-smokers were protected from the effects of tobacco smoke in the workplace. More specifically, the law mandated that when

smokers and non-smokers worked together in a single room, smoking was forbidden unless the non-smokers could be adequately protected by means of proper ventilation. In 1988, the first privately owned airline, Lauda Air, banned smoking during international flights from Austria to East Asia and Australia (Shafey et al, 2003).

Product regulation began in 1994. The first law regulating tobacco products limited tar content in cigarettes. The official limit was 15 mg of tar per 1 gram of tobacco by January 1994, and 12 mg by January 1998, in order to comply with European Union standards. The year Austria joined the Union, a comprehensive *Tobacco Law* was enacted. This law established a minimum age to purchase cigarettes, reinforced current requirements for health warning labels, and restricted cigarette advertising and sales. Along with this, it provided that regulations be adopted in the interest of public health – in order to control the consumption and use of harmful ingredients like additives, aroma, flavouring, and pesticides in tobacco products (Shafey et al, 2003; Aspect Consortium, 2004).

The *Tobacco Law* also banned smoking on any premise used for education, negotiations, and school sporting activities. Though, smoking was not banned on premises used exclusively for private purposes. Despite this, smoking was restricted in many public spaces, including public authority buildings and establishments in which children or teenagers were supervised or provided with accommodations. Smoking restrictions expanded to include universities and vocational training establishments, as well as establishments used for performances or exhibitions. While designated smoking

areas could be specified, tobacco smoke was not permitted into areas where the smoking ban applied. More specifically, sufficient numbers of non-smoking areas had to be in fixed locations in facilities of public and private bus, rail, air, and shipping operations. Apart from environmental tobacco smoke (ETS) restrictions, the *Tobacco Law* banned advertising of tobacco products with more than 10mg of tar (to be effective January 1997) and press advertising was restricted to not more than one advertising page per periodical, per manufacturer (Shafey et al, 2003; Aspect Consortium, 2004).

The comprehensive *Tobacco Law* also represented efforts to comply with supranational directives. For example, policy was enacted which modified on-pack health warnings, to include: “Smoking increases the risk of cancer” and “Smoking contributes to heart disease.”

In 1999, Austrian Airlines banned all smoking on all flights. Also in 1999, supporting legislation was passed restricting smoking further in public indoor places. For example, smoking was restricted in health facilities, elevators, theatres, cinemas, and concert halls (Shafey et al, 2003).

More advertising restrictions were also enacted in 1999. Television and radio advertising of tobacco products was prohibited. Advertising of products in cinemas was only allowed after six o’clock in the evening. In addition to advertising restrictions in periodicals, newspaper advertisements were restricted to one page per issue and specifications were given as to the distance between tobacco-advertisement posters (at least 150 meters). Tobacco posters were also no longer permitted in the vicinity of

schools. In the same year, legislation banned advertising by any means of public transportation, except international trains, ships, and airways (Shafey et al, 2003).

Product regulation in 1999 consisted of restrictions on the promotion of generic cigarettes or brands with tar content in excess of 10 mg per 1 gram of tobacco. Additionally, celebrities, athletes, or young people aged thirty and under were no longer allowed to be used in tobacco advertising. This restriction was in response to tobacco companies eluding to the healthy lifestyle benefits of smoking. Finally, requirements were established requiring ingredient disclosure on cigarette packs (Shafey et al, 2003; Aspect Consortium, 2004).

Belgium: Tobacco Control

Belgium began controlling tobacco in September 1976. The first law prohibited smoking in public transportation vehicles, including trams, buses, and underground trains. However, smoking was not banned. Smokers were instead given designated areas for consumption. In 1979, legislation was enacted affecting the manufacturing, marketing, and promotion of tobacco products. More specifically, restrictions were placed on vending machine distribution, health warning labels were introduced, tar content was prescribed, ingredients were disclosed on packaging, and advertising and sales were restricted (Shafey et al, 2003).

In March 1980, free tobacco products (i.e. promotional samples) were prohibited. The following September, tar *and* nicotine content were prescribed and health warnings

were required on all tobacco products (similar to Austria, four labels were used on an annual rotating basis). In order to strengthen past legislation, all tobacco packaging, advertisements, and point of sale materials had to carry tar and nicotine levels of tobacco products (Shafey et al, 2003).

Further advertising legislation was passed in January 1982, restricting advertising in the form of bills or posters and required further disclosure of tar and nicotine levels by manufacturers, for cigarettes. In the same year (December), an official decree was enacted promoting health education curricula and information programs concerning tobacco and tobacco use. The same legislation restricted smoking in public places, health care facilities, and on public transportation (Shafey et al, 2003).

Smoking was also prohibited on premises where school children were present, in preschools and establishments providing primary, special, and artistic schooling. Finally, in order to strengthen previous September 1980 legislation, disclosure statements were required with clear indications of tar and nicotine content on packs of cigarettes, cigars, cigarillos, and other tobacco products. An additional decree in December 1982 promoted restrictions against advertising directed at children. In March 1987, legislation was enacted to reinforce the prohibition of smoking in public places and on premises in which children or persons of school age were received, cared for, or provided accommodation (Shafey et al, 2003).

In December of 1990, Belgium passed its first laws regulating tobacco products. By December 1992, maximum tar yields were to be 15 mg per 1 gram of tobacco and

maximum nicotine yields were to be 1.5 mg. By December 1997, amounts were to be 12 mg and 1.2 mg, respectively, in order to comply with EU directives. Along with this, vending machine distribution of tobacco products was forbidden, unless located in a tobacco retail shop (Shafey et al, 2003; Aspect Consortium, 2004).

In support of the official decree in December 1982, a law in April 1990 prohibited advertising of tobacco products on radio, television, in newspapers, and other publications aimed at minors. Advertising was also prohibited using the following means:

- aircraft, boats, or vehicles, except for those taking part in competitions or being used to transport tobacco;
- films, videotapes, slides, other types of visual presentations;
- the distribution or door-to-door delivery of stickers or promotional leaflets;
- free samples of tobacco products;
- brand names or symbols of tobacco products, or any other image usually associated with everyday objects, other than those which are part of the personal equipment of participants in sporting competitions;
- and illuminated signs, except within the entrance to places where tobacco products are available for sale (Shafey et al, 2003).

Where advertising is permitted, contents are limited to the name of the product, brand name and symbol, representations of products directly associated with smoking, tar and nicotine levels, and information on price and quality.

In May of 1990, additional environmental tobacco smoke (ETS) legislation was enacted. Smoking was partially restricted in enclosed places where public services are distributed. This includes places where ill or elderly people are admitted or treated, healthcare is provided, children or young people are admitted, educational and professional training are provided, entertainment is offered, exhibitions are mounted, or sports are practiced. Designated smoking areas are allowed and restrictions are not applicable to places designed specially for the provision and consumption of food and drinks, which do not exceed 50 square meters in area. Clearly defined areas can be set aside for smokers, but they must minimize the nuisance of smoke to non-smokers. In places where smoking is permitted, a proper ventilation system must be installed, clear visible signs are to be used, and signs must be displayed with the wording “Beyond this point, it is forbidden to smoke in the whole building” (Shafey et al, 2003, p.447)

Following in January of 1992, the executive of the French Community enacted an order concerning the dissemination of educational campaigns for health by broadcasting agencies. This was followed by a 1993 order obliging employers to adopt a policy on smoking at work, to be negotiated with the company’s health and safety committee (Shafey et al, 2003).

In December of 1997, the *Crown Order of December 1982* was repealed. This legislation continued to promote restrictions on tobacco products, specifically prohibiting advertising at point of sale locations, broadcast media, on billboards, and sponsorship of sports and other company events. Also the use of names of services or products indirectly related to tobacco products was prohibited. Finally, the launch of new products bearing the same name as tobacco products was completely banned (Shafey et al, 2003).

In September 1999, the Belgian Court amended previous advertising bans so as to permit tobacco advertising at worldwide events until July 2003. Permission for indirect advertising was also reinstated (Shafey et al, 2003).

Denmark: Tobacco Control

Denmark did not begin controlling tobacco until 1980. The first law (March 1980) prohibited smoking on premises where food was being prepared for resale. Then, in June of 1987, the Ministry of Culture prohibited advertising of tobacco on television. Shortly afterwards, in September 1988, The Ministry of Health banned smoking in all Ministry of Health workplaces and in meetings of public councils, boards, and commissions *unless* all participants agreed to permit smoking. Individual ministers were directed to introduce non-smoking environments on public premises under their jurisdiction. However, smoking on government, state-owned premises (i.e. administrative offices and state-owned hospitals, day care centers, residential institutions

and educational establishments) was restricted. Along with this, smoking was prohibited on public transport with fixed routes (Shafey et al, 2003).

In March 1990, the Ministry of Health began regulating labelling of tobacco products and tar content. More specifically, all tobacco products were to have the words “extremely injurious to health” printed on the package, along with tar and nicotine information (Shafey et al, 2003, p. 459). The *Council on Preventive Policy* and the *Council on Tobacco-Induced Damage to Health*, in May of the same year, passed a law establishing 1) committees on tobacco control, 2) information programs, and 3) evaluation of smoking control programs (Shafey et al, 2003).

In June of 1990, the Ministry of Health was authorized to issue provisions to implement the *Directives of the European Union Communities* on the labelling of tobacco products and the tar content of cigarettes and supervise compliance with these requirements. These provisions included requiring all packs of tobacco products to carry the general warning, “Extremely harmful to health -- National Board of Health” and also a specific warning (rotating from previous legislation). Also, tar and nicotine contents had to be stated on the pack (Shafey et al, 2003, p. 460).

The Ministry of Social Affairs enacted an environmental smoking (ETS) order protecting public day care centers as well as areas occupied by children, from smoke. Orders were also enacted by the Ministry of Labor, establishing smoke-free areas for coffee and lunch breaks in the workplace. In December 1992, previous legislation was

reinforced concerning labelling of tobacco products, tar content of cigarettes, and sales of tobacco products (Shafey et al, 2003).

Then, in December 1992 a code of practice between the tobacco industry and the government was established. The agreement applied to all tobacco products, including cigarette paper and tubes. Bans were imposed on all television and radio advertising and advertising in food outlets and restaurants. Bans were also imposed on the use of models, actresses or actors appearing to be under 30 years of age, celebrities, health personnel, and sports personalities. Press advertising was restricted to a single page not exceeding 2000mm of a single column. Also, advertisements were prohibited from appearing near articles or pictures related to youth or sports. Health warnings had to cover ten percent of the total area of the advertisement and all previous restrictions now applied to indirect advertising ((Shafey et al, 2003; Aspect Consortium, 2004).

In June of 1995, local authorities and every county council were obliged by the government to establish regulations on smoke-free environments in public sector workplaces, institutions, and means of transport. In order to reinforce this law, the Council on Prevention was made responsible for advising national and community authorities on measures to be taken to promote health and to prevent diseases and accidents. The law also provided for the appointment, by the Minister of the Interior, on an independent Council on Tobacco-Induced Damage to Health (Shafey et al, 2003).

In March of 1998, smoking was banned in schools, universities, and on all domestic flights. Partial restrictions applied to international flights, all intra-Scandinavia

and inter-European Union flights (with exception of Spain, Portugal, Greece, Italy, and Ireland) although smoking on ‘long haul’ was left to the airlines’ discretion (Shafey et al, 2003).

Finland: Tobacco Control

Finland began controlling tobacco in 1976. The first set of laws included substantial measures to restrict smoking. Over eight percent of estimated annual tax revenues from tobacco taxes were to be appropriated for tobacco control. Bans on direct and indirect advertising were promoted, except for foreign printed publications whose main purpose is not advertising tobacco. Bans were also passed concerning sponsorship and brand stretching (Shafey et al, 2003).

The sale of tobacco products or accessories to minors under 18 years was forbidden and signs reading “tobacco may not be sold to persons under the age of 18” and “tobacco is addictive and damages health” had to be posted where products were sold (Shafey et al, 2003, p. 463).

Vending machines were only allowed in places licensed to sell alcohol. Designated smoking areas had to be provided in government buildings (although employees were allowed to smoke in offices with no clients and where other workers were not involuntarily exposed to second-hand smoke). Designated smoking areas were established at private worksites, healthcare facilities, educational facilities, buses, ferries,

taxis, railroads, places of entertainment, shopping centers/service centers, and restaurants. Smoking was also banned in bars and nightclubs (Shafey et al, 2003).

Tobacco manufacturers were required to disclose ingredients to the Ministry of Social Affairs and Health once a year and health messages and nicotine amounts were required on all packs. The Council of State was permitted to issue regulations of substances harmful to health as well as regulate the maximum permissible amount of additives used in tobacco products. Fines and cease-and-desist orders were set as penalties for breaking the law (Shafey et al, 2003).

In the following year, licenses were required for vending machines other than in restaurants licensed to sell alcohol. Oral tobacco was prohibited from being commercially imported, sold, or otherwise assigned. Nicotine and tar testing methods were prescribed and health warning labels on tobacco products were reinforced, except for exports and duty free shops (Shafey et al, 2003).

In February of 1982, the Council of State prescribed the maximum permitted level of nicotine in tobacco products as 50 mg in 1 g of dry matter of tobacco product. In this law it is also prescribed that maximum permitted levels of harmful substances be applied to factory-manufactured cigarettes. Ten years later, the Council also passed a law regulating tar content to 15mg in cigarettes. Also in 1992, legislation was enacted requiring health labels on all tobacco products as well as full disclosure of nicotine and tar levels (Shafey et al, 2003; Aspect Consortium, 2004).

In August of 1994, advertising bans were applied to smokeless tobacco. Shortly afterwards, in March of 1995, children under the age of 18 were prohibited from buying cigarettes, smoking was banned in the workplace and in public places, including night clubs, concert halls, theatres, schools, and youth clubs. Then, in 1999, the sale of tobacco products was prohibited over the internet, unless proper taxing was implemented. Along with this, the Finnish Tobacco act of 1999 required that restaurants gradually increase non-smoking areas. Companies were obliged to set aside specially ventilated smoking rooms, as smoking was banned from all offices with more than one employee. Smoking was also banned in all public areas, such as stairwells and corridors. In the same spirit, smoking was banned on all Finnish airlines (Shafey et al, 2003).

France: Tobacco Control

France began controlling tobacco in July of 1976. Initial legislation created a legal basis for restricting smoking in public places. It also banned advertising on radio, television, in cinemas, and on all billboards except in tobacco shops. Free distribution of tobacco and other products bearing tobacco brand logos was forbidden and advertising in newspapers and magazines was restricted. More specifically, the amount of space devoted annually to tobacco advertising in the media was not to exceed the average number of advertising pages published in 1974-1975. Also, advertising was banned in publications for children. Sponsorship of sporting events was also banned, except for a limited number of events involving motor vehicles. Finally, smoking was prohibited in

schools receiving children under 16, in hospitals, and on public transport (Shafey et al, 2003).

In September of 1977, smoking was prohibited in places intended for use by groups where the practice may have had "harmful effects upon health." Following this, legislation was enacted regulating tobacco products. In January of 1978, a list was established containing substances, which must be indicated on cigarette packages and the conditions for determining the presence of such substances. In the same year, tobacconists' shops were banned from opening in hospitals. Also, smoking was restricted on all aircraft, but not banned. More specifically, effective devices were provided to prevent the spread of smoke into the non-smoking areas in aircraft (Shafey et al, 2003, p. 464).

In November of 1978, the Law of August 1905 concerning fraudulent practices and misbranding was applied with regard to products and services related to tobacco, tobacco products, and tobacco substitutes. A few months later, legislation was also enacted restricting the space allowed to advertise tobacco in printed press (Shafey et al, 2003).

In June of 1979, the government produced a list of additives permitted in the manufacture of tobacco and tobacco products and their substitutes. Then, in 1984, a specific list was passed into law specifying additives (flavouring agents, texture agents, preservatives, and coloring matter), their permitted levels, and their purity criteria. Three years later, in 1987, smoking was prohibited in health and educational establishments,

food production facilities, premises for young people under 16 years of age, and some workplaces. The sale of tobacco was prohibited in all health establishments (Shafey et al, 2003).

In January of 1988, information programs were established in order to emphasize the need to observe provisions of the law attempting to reduce the consumption of tobacco products in hospitals, in particular. It also stated the specific role of the medical profession in educating patients on the issue. One year later, vending machines were banned from being located outside tobacco shops (Shafey et al, 2003).

In 1991, several measures were enacted to combat tobacco use in France. Free samples were prohibited, smoking was banned in palaces intended for collective and scholastic use, in collective means of transport, and work places (except in areas specifically reserved for smokers). Staff of public and private educational institutions were to be provided with information by the school physician concerning tobacco use. All cigarettes had to conform to the content restrictions by the end of 1992, with infractions punishable by fines and brand suspension (Shafey et al, 2003).

Written space for tobacco advertising in newspapers and magazines had to be reduced by 66%, by 1992, from the average space for such publicity during 1974-1975. Maximum tar limits and labelling requirements set by the European Union were to be met. Any advertising, whether direct or indirect, for tobacco or tobacco products, as well as any form of free distribution, was prohibited. Also, any form of sponsorship was prohibited if its objective was direct or indirect advertising for tobacco or tobacco

products. All point of sale advertising was required to be accompanied by a health message and the government established the date of an annual event entitled "No Tobacco Day". This legislation also prohibited using the price of tobacco in calculating consumer price indexes (Shafey et al, 2003, p. 465; Aspect Consortium, 2004).

In April of 1991, the maximum tar content of cigarettes was implemented by European Union directive and health warnings were required to accompany any promotion or advertising for tobacco products. In the same year, methods were determined for analysing nicotine and tar content and for verifying the accuracy of the legends to be displayed on packs. In addition to this, systems were established for printing health warnings and compulsory legends on tobacco packaging of all tobacco products (Shafey et al, 2003).

In May of 1992, smoking was prohibited in all public places, including businesses, restaurants, schools, workplaces, and public transport, with areas reserved for smokers. Smoking was totally prohibited in theatres, exhibition halls, sports arenas, places where food was prepared or presented for sale, elevators, taxis, aircraft on all domestic flights of less than two hours operated by national carriers, and dining cars of trains. Then, in November of 1992, the Evin Law was passed, which banned the direct and indirect advertising of tobacco products, required posters to carry standard health warnings, banned smoking of tobacco in all public places (including restaurants, offices, educational institutions and leisure centers, except in designated areas), buses and Metro stations in Paris and Lyon. The proportion of smoking areas in trains was reduced to

thirty percent -- with smoking banned in restaurant and buffet cars. Individuals who broke bans risked fines (Shafey et al, 2003).

In March of 1993, smoking was banned in prisons. One year later, additional sales restrictions were extended to smokeless tobacco. In September of 1995, maximum additive levels were set and an advisory group on additives in tobacco products was established. Also, smoking was banned on transatlantic flights and flights within the European Union on Air France. Finally, in 1992, cigarette tar and nicotine levels were specifically set to meet European Union standards -- 12 mg of tar and 1.2 mg by December 1997 (Shafey et al, 2003).

Germany: Tobacco Control

Germany began controlling tobacco in July 1957. Minors under 16 years of age were not permitted to smoke in public. Then, in 1972, partial restrictions were enacted on advertising in printed newspapers, magazines, billboards, points of sale, kiosks, and cinemas. Advertising was also banned on television and radio. Press, outdoor posters, point of sale promotions, sponsorships, and samples were allowed but subjected to restrictions. In the same year, advertisements were banned that created the impression that consumption of tobacco products was 1) harmless to health, 2) likely to have favorable effects on bodily functions and physical performance, 3) likely to induce juvenile or adolescents to smoke, 4) make it appear that inhaling of tobacco smoke is

something to be imitated, or 5) suggests that tobacco products are natural or pure (Shafey et al, 2003).

In December of 1975, a list of permitted and prohibited ingredients was updated. Then, in October of 1991, tobacco products were required to have labels on the maximum tar content in cigarette smoke. Health warnings, however, were not required until 1995. In March of 1996, oral smokeless tobacco was banned. Following this, the High Court enacted a decision, which allowed German companies to ban smoking completely if most employees agreed with the measure. In this case, however, companies had to provide acceptable smoking facilities outside the building. Also in 1996, smoking was banned on all domestic flights and on all flights of Lufthansa airlines. In the same year, cigarette tar and nicotine levels were set to meet European Union standards of not more than 15 mg of tar and 1.5 mg of nicotine by December 1997 (Shafey et al, 2003).

Greece: Tobacco Control

Greece began controlling tobacco in 1952. The first law prohibited smoking on trains and buses. In April of 1979, smoking was also prohibited in hospital establishments and private nursing homes. A smoking room, reserved for hospital personnel and visitors, was required on every floor of establishments that had an area of 200 square meters or more. In April of 1980, smoking was prohibited in all enclosed public places belonging to state agencies, public or private companies and organizations,

and in other establishments, including post offices, electricity board facilities, hospitals and private clinics, and cinemas and theatres (Shafey et al, 2003).

In 1987, advertising of tobacco products was banned from radio and television. One year later, the Minister of Health, Welfare, and Social Security was given power to regulate the advertising of tobacco products. In December of 1988, health warnings became mandatory on cigarette packs and cigarette advertisements. In February 1989, tobacco advertising was prohibited in cinemas (except in films not suited for minors), in public and private educational institutions, in youth centers, and in sports centers. Advertisements were also required to carry the warning "The Ministry of Health issues the following warning: SMOKING SERIOUSLY DAMAGES HEALTH" (Shafey et al, 2003, p. 467).

In March of 1990, smoking was banned on all domestic flights. In the same year, the European Union directive on tar yields was implemented. In the following year, the sale of oral moist snuff was banned and smoking was further restricted in buses, planes, trains, hospitals, and public offices. More specifically, a complete ban was instituted on smoking in health care facilities, school buildings, government offices, public transportation, and domestic air transport. Partial restrictions were passed on international flights (Shafey et al, 2003).

Finally, in 1999, Greece was granted a time extension to meet the tar and nicotine standards set by the European Union. They were required to come into compliance with 15 mg of tar and 1.5 mg of nicotine by December 2000, and 12 mg of

tar and 1.2 mg of nicotine by December 2008 (Shafey et al, 2003; Aspect Consortium, 2004).

Italy: Tobacco Control

Italy began controlling tobacco in 1962. The first law prohibited all advertising of tobacco products, irrespective of the medium employed. Bans included point of sale, sampling, sponsorship, television, radio, cinema, press, and outdoor advertising. Limited trade advertising was permitted by the Federazione Italiana Tabaccai (FIT) (Shafey et al, 2003).

In November 1975, smoking was banned in hospitals, school classrooms, closed premises used for public meetings, cinemas and theatres, dance halls, betting shops, academic lecture halls, libraries, reading rooms open to the public, and private and public art galleries. Fines were set for owners or managers of the premises not respecting the law. Smoking was also severely restricted on public transport with a ban on smoking in buses. In May 1976, an exception was made to the smoking ban for premises in which an air conditioner or ventilation system, meeting prescribed conditions, was installed (Shafey et al, 2003).

In February 1983, fines were raised for breaking advertising prohibitions laid down in April 1962. Six years later, health warnings were required to be displayed on tobacco products and the promotion of products or services named after tobacco goods was also banned. In July 1990, Italy implemented the European Union directive on

maximum tar yields. One year later, the government also implemented the European Union directive on labelling -- health warnings and ingredient disclosure. Also in 1991, direct and indirect advertising of tobacco products on television was prohibited (Shafey et al, 2003).

In December 1995, smoking was prohibited in all premises used, for whatever purpose, by the public administration and public bodies in carrying out their institutional functions, as well as by persons in the private sector providing public services. Premises subject to such prohibition were to display a notice to this effect, indicating the regulation in question, the sanctions incurred, and the authorities empowered to assure compliance with the prohibition and record infringements (Shafey et al, 2003).

In the same year, it was made illegal to sell or give tobacco products to children under the age of sixteen. Along with this, smoking was prohibited on all domestic flights, as well as eighty percent of flights between the U.S. and the European Union on Aitalia airlines (Shafey et al, 2003).

Finally, in 1995, cigarette vending machines were only allowed to be installed in the immediate surroundings of the relevant retailer. They could not be installed in buildings linked to the supervision of the arts and all advertising on cigarette vending machines was prohibited (Shafey et al, 2003).

The Netherlands: Tobacco Control

Tobacco control began in the Netherlands in 1981. The first law established that smoking was a threat to health. More specifically, the words “Minister of Health and Environmental Protection” and nicotine and tar contents were required to appear on cigarette packs. In December 1986, tar and nicotine contents were required to be shown on cigarette packaging with official health warnings on both the front and backs of packs. A system of four rotational health warnings was put into operation and tar and nicotine levels were required to be determined in accordance with a method designated by the ministers of a) Welfare, Health, and Culture Affairs, b) Agriculture and Fisheries Agency, and c) Department of Economic Affairs (Shafey et al, 2003).

Shortly afterward, the Tobacco Law of 1988 was enacted requiring ingredient disclosure by manufactures and prohibiting the sale and use of tobacco products in health care facilities, social welfare offices, sports arenas, and socio-cultural and educational establishments administered by the State. Furthermore, advertising of tobacco products was forbidden on radio and television. Finally, oral tobacco was prohibited (Shafey et al, 2003).

In December 1989, smoking was banned in some areas of buildings belonging to or run by the state, including all places to which the public had access and all communal areas (except offices), specifically rooms containing counters, waiting rooms, halls, corridors, stairways, elevators, meeting rooms, classrooms, toilets, canteens, and rest and leisure rooms. However, smoking bans could be suspended in waiting rooms, canteens

and leisure rooms where permission may be given to smoke either on a third of the surface area or for a period limited to one-third of operating hours, if this does not bother non-smokers (Shafey et al, 2003).

In 1992, restrictions were enacted on smoking in workplaces, public places, schools, health care facilities, and government buildings. Penalties were also set for breaking the decree. In August 1998, all smoking was banned on all flights of KLM Royal Dutch Airlines and the sale of tobacco products to individuals under 18 years of age was prohibited (Shafey et al, 2003).

One year later a code was established between the tobacco industry and publishers. Advertising was not to be aimed at young people or non-smokers. A relationship between health, sports, youth, and tobacco was not allowed to be suggested in advertisements. No advertising was allowed in testimonials, billboards, aircraft, trains, buses, or hospitals. No collective campaigns for tobacco products were allowed and health warnings were required to be in all advertisements. Portraying people below 30 years of age or advertising in media with more than 25% young readers was prohibited (Shafey et al, 2003).

Finally, no advertising was allowed in nightclubs, at festivals or in movie theaters. Free samples were prohibited to people below 18 years of age and no sports sponsorship (except motor and car racing) was allowed. Direct mail or un-addressed mail actions (without prior consent) were prohibited (Shafey et al, 2003).

Portugal: Tobacco Control

Tobacco control began in Portugal in 1978. Smoking was prohibited in urban public transport as well as in inter-urban public transport on journeys lasting up to one hour. In September 1980, general principles for smoking control were set out, including an advertising prohibition, smoking prohibition, requirements for health warnings and ingredient disclosure, maximum nicotine and tar contents, and penalties. As of 1984, all tobacco advertising, with the exception of limited point of sale activities, was prohibited (Shafey et al, 2003).

In May 1983, evaluation standards were established for smoking control programs and smoking was prohibited on the premises of health care facilities, in teaching establishments, and on premises intended for persons aged less than 16 years of age. Also, advertising for tobacco in national media outlets was prohibited. Health warnings were required for all cigarettes intended for inland consumption with an indication of the nicotine and tar content on the pack (Shafey et al, 2003).

In the same year, tobacco advertising on television, radio, in newspapers, magazines, coupons, cinemas, billboards, and at points of sale was prohibited. Health warnings were also required for remaining advertising. Smoking was prohibited in all places where health care was dispensed, all premises used by minors under 16 years of age, educational establishments, enclosed sports facilities, theaters and other enclosed premises for entertainment and leisure activities, and public waiting rooms and elevators (Shafey et al, 2003).

Specific smoking areas could be provided on the condition they were not used by sick people, minors, women who were pregnant or breast feeding, or participants in sporting events. In addition to this, smoking was banned in libraries, restaurants (at owner's initiative) and workplaces (at non-smokers' initiative if there are areas where smoking can be permitted). Smoking was also banned in the Parliament assembly halls and meeting rooms. Finally, fines were established for individuals and organizations breaking these laws (Shafey et al, 2003).

In 1991, Portugal implemented the European Union directive on maximum tar content and labeling. In the same year, a decree was enacted which allowed tobacco sponsorship of motor sports vehicles competing in organized events which were part of the European Union or World championship. In addition to this, committees on tobacco control were established and bans were instituted against the sale and consumption of oral smokeless tobacco (Shafey et al, 2003; World Health Organization, 1997).

In 1996, free tobacco samples were forbidden, vending machine distribution was banned, and smoking was banned on all flights of TAP Air Portugal airlines. Finally, in the same year, the minimum age for purchase and consumption of tobacco was established as 18 (Shafey et al, 2003).

Spain: Tobacco Control

Tobacco control began in Spain in 1978. The first Crown Decree focused attention on regulating advertising for tobacco and alcoholic beverages by state

broadcasting media. In April 1979, the expression 'low nicotine' was allowed to be used in connection with the marketing and advertising of cigarettes; only if nicotine yields of one cigarette were less than 1 mg. The expression 'low tar' could only be used if tar yields of one cigarette were less than 16 mg of tar. Under this decree, samples of all cigarette products were to be submitted to government authorities for standards testing. Furthermore, in May 1980, low tar and low nicotine cigarettes were only allowed to be advertised as such when authorized by the government (Shafey et al, 2003).

In 1982, smoking was banned in health care facilities and on public transportation. Information advertising of new tobacco products with low tar and nicotine contents were permitted for two years following their introduction to the market. All advertising of tobacco products was banned through public information channels (television and radio). Health warnings were required on all packs of tobacco for sale on the domestic market and sales of tobacco to those under 16 years of age was forbidden. New tobacco products with more than 24 mg of tar and 1.8 mg of nicotine were banned from introduction into the market (Shafey et al, 2003).

In July 1984, the rights of non-smokers were formally recognized under Spanish law, which stated that the right to health of the non-smoker always precedes the right of smokers to smoke. In the same decree, smoking was banned (except in designated areas) in welfare establishments for children under 16, health centers, educational establishments, public administration premises to which the public has direct access, premises where food is prepared, exhibition halls, reading rooms, enclosed commercial

premises, theaters, cinemas, sporting halls, elevators, urban and long distance vehicles and means of collective transportation admitting standing passengers, school buses, medical transportation, domestic flights less than 90 minutes, and workplaces with industrial contaminants or pregnant women (Shafey et al, 2003).

In March 1988, rotating health warnings and the display of tar and nicotine contents on cigarette packs was required. The maximum tar yield for one cigarette was established at 15 mg and the maximum nicotine yield was 1.3 mg. Cigarettes classified as low nicotine, low tar, as well as those with light or mild designations were required to meet specific standards. Smoking was not permitted in welfare centers for youth, health centers, teaching centers, halls for use by the general public, all urban and long-distance vehicles for collective transport, school vehicles, rail and sea transport, and in any place where a greater risk to the health of workers exists through the combination of the harm caused by tobacco and industrial contamination (Shafey et al, 2003).

Posters reminding the public of the ban on sales to children were required to be placed in tobacco shops. The sale of tobacco products was forbidden in health establishments, educational establishments, and those intended for care of children. Products were allowed to be sold from automatic vending machines only on enclosed premises and machines were required to display health warnings (Shafey et al, 2003).

In June 1988, signs and warnings to designate non-smoking areas were required to be visible and intelligible in design and format. Nicotine and tar contents were required to be stated on packs of cigarettes marketed in Spain. In the same year, tobacco

advertising on television was restricted to the hours of 2200 and 0800. Press and billboard advertising was limited and free distribution of cigarettes was prohibited (Shafey et al, 2003).

Similarly, in 1995, tobacco manufacturers agreed not to advertise in theaters or on billboards, as well as bus shelters that were situated less than 200 meters away from schools or colleges (Shafey et al, 2003).

Finally, in 1998, all advertising of tobacco products was banned from television, video, audio tapes sold or rented to the public, publications whose purpose is primarily addressed to minors under the age of 18, cinemas showing films intended expressly for and attended mainly by young people aged under 18 years of age, posters, billboards, and other large public display media located within less than 200 meters from the entrances to schools and other educational centers (Shafey et al, 2003; World Health Organization, 1997).

Product promotion and promotional articles were not allowed to be addressed persons under the age of 18 and printed communication matter regarding tobacco products was required to display health warnings, as well as nicotine and tar content. Finally, Iberia and Spanair ban smoking on all North Atlantic, Intra-European Union and Intra-Spain flights. The only flights where smoking would be allowed were between Spain and Buenos Aires, Rio de Janeiro, and Sao Paulo and between Spain and Cuba.

Sweden: Tobacco Control

Tobacco control began in Sweden in 1975. The first set of laws focused on warnings and declarations of harmful content to be displayed on tobacco products. In May 1976, the National Board of Health and Welfare required all tobacco products to display health warnings and ingredients. Following in 1978, The National Board of Consumer Policies prohibited advertising of tobacco products in the sports pages of daily newspapers, in sports newspapers, and in publications aimed at people under 20 years of age. At this time, distribution of free samples was prohibited (Shafey et al, 2003).

Then, in 1982, the National Board of Health and Welfare amended the 1976 policy by requiring the levels of harmful substances in cigarette smoke and the year to which they are applicable, on cigarette packs. Also the permitted discrepancy between declared levels and actual levels found in products was raised to fifteen percent (Shafey et al, 2003).

One year later, smoking was restricted in the workplace and other public places. In 1986, smoking was banned on all domestic flights of Linjeflyg airlines. In 1988, a general law was passed stating that no one should, against his will, be subjected to discomfort or to health hazards caused by tobacco smoke in public places and workplaces. In 1993, the sale and advertising of tobacco products was restricted. In the following year, smoking was banned in schools, health care facilities, and on public transportation. Bans were also instituted on advertising of tobacco products (except in

tobacco shops). More specifically, only trade magazines were allowed to carry tobacco advertisements and even they were restricted in content (Shafey et al, 2003).

Within this legislation, employers were given the responsibility for ensuring that employees are not exposed to smoke at work. Similarly, restaurants seating more than 50 people were required to have a non-smoking area. Then, in 1994, the Tobacco Law was passed. This law prescribed maximum levels for harmful substances that a tobacco product contains. Cigarette packs were required to show one of 16 messages issued by the National Board of Health and Welfare. Packs were to display a declaration of content, as well as the corresponding average for all brands sold in Sweden (Shafey et al, 2003).

In addition, smoking was prohibited on premises intended for activities for children and young people, for medical and health care, for joint use in residential accommodation and special service or care, on domestic public transport or in areas intended for use by passengers, in premises where a public meeting or event is being held and in other premises if the general public has access. Non-smoking rooms were required to be provided in hotels, transport, and restaurants with more than 50 seats. All radio and television advertising was banned and other forms of advertising were to be used in moderation. Tobacco manufacturers were not allowed to actively seek new areas of trade or encourage tobacco use (Shafey et al, 2003).

Finally, beginning in 1998, the maximum permitted tar level was lowered to 12 mg per cigarette to comply with European Union standards and maximum nicotine

content was lowered to 1.3 mg per cigarette, as specified in 1993 (Shafey et al, 2003; Aspect Consortium, 2004).

United Kingdom: Tobacco Control

Tobacco control began in the UK in 1964. The first set of laws focused on banning advertising for cigarettes and roll-your-own tobacco on television and radio outlets. Then in 1978 and 1979, legislation was enacted to regulate financial matters concerning tobacco revenue and establish standards for higher tar cigarettes, respectively. In 1986, the sale of oral tobacco was prohibited and it was made an offense to sell tobacco products to persons under the age of 16, including vending machine sales. As such, owners of vending machines were required to prevent the machine from being used by those under 16 years of age (Shafey et al, 2003).

In 1986, a voluntary agreement on advertising, promotion and health warnings was passed. This agreement ended cinema advertising, limited poster advertising to half of the level of the previous year, prevented posters from being positioned close to schools, and prohibited advertising in magazines where one third or more of reader are young women. Also, an independently chaired Committee for Monitoring Agreements on Tobacco Advertising and Sponsorship (COMITAS) was established. Finally, this agreement provided for the addition of six rotating health warning on all packs and advertisements (Shafey et al, 2003).

In 1988, smoking was banned on all domestic flights and the sale of oral snuff was prohibited. In 1991, the *Children and Young Persons Protection from Tobacco Act* increased penalties for selling to minors. Additionally, local authorities were cited with the responsibility for implementing the law. This set of laws also required retailers and vending machine operators to display warning notices stating that “it is illegal to sell tobacco products to anyone under the age of 16” (Shafey et al, 2003, p.503).

Similarly, in 1992, the government required that health warnings be displayed on tobacco products and that advertising be restricted further. These restrictions were purposely designed to be more strict than those mandated by the European Union. For example, limits were placed on advertising on videos for private use as well as with magazines with 25% young female readership. The number of external advertising signs was required to be reduced by 50%, phased over five years (Shafey et al, 2003).

In the same year, the government enacted product regulations -- setting the maximum tar limit in a cigarette at 15 mg. Along with this, the *Consumer Protection Act of 1992* required specifically that tobacco products be labeled clearly with health warnings and ingredient disclosures on the pack (Shafey et al, 2003; Aspect Consortium, 2004).

In June 1995, shop-front advertising of tobacco products was prohibited, along with advertising on posters under 48” sheet size (mobile size). In addition, limits were placed on expenditures on poster advertisements and government health warnings were required to appear on all such advertisements. Tobacco advertising was also banned on

computer games and in any place within a 200 meter radius of school entrances (Shafey et al, 2003).

In 1999, smoking was banned on all flights of British Airways, British Midland airlines, and Virgin Atlantic airlines. In the same year, smoking was restricted in workplaces, public places, schools, health care facilities, public transportation, and in government buildings (Shafey et al, 2003).

Framework for European Tobacco Control Policy Explanations

Country-level policy descriptions make clear the wide variation of instruments used to control tobacco, especially cigarette consumption. These non-price policies come in addition to fiscal policies designed to make cigarette consumption more expensive by raising cost through different taxation strategies. In order to link policies to specific outcomes, it is beneficial to consider the causal theory about how general policy goals are obtained (Meier and Licari 1998). Policies controlling tobacco are aimed at manipulating either the supply or demand of tobacco products available to consumers. Manipulating demand for tobacco via government intervention is difficult, however, given the addictive nature of tobacco products, especially cigarettes. The ability of target populations (e.g., manufactured-cigarette smokers) to respond to these regulatory efforts is constrained by relative levels of addiction to the commodity. This phenomenon in the tobacco politics literature is well documented. For example, Licari (1997, 2000) and Meier and Licari (1998) develop a formal model of cigarette consumption which

accounts for three levels of possible addiction, or demand elasticities. *Addicts* theoretically have inelastic demand for cigarettes. Increasing the price of cigarettes does not compel addicts to decrease demand. Conversely, quitters have highly elastic demand curves which are sensitive to most efforts aimed at deterring consumption. In this situation, price increases of any size provide compelling reason to quit smoking. Between addicts and quitters are those with normal demand elasticities. Their demand curves are theoretically only slightly more inelastic than quitters (i.e., closer to the demand elasticity associated with a non-addictive commodity or good). Aggregate consumer demand represents all three types of consumers: addicts, quitters, and those in between.

Traditional price policies may thin aggregate demand by altering the target population to include those less likely to quit. Non-price tobacco control policies are also aimed at shifting aggregate demand towards less consumption, by conveying further costs, or disincentives. Table 1 summarizes the main non-price policy instruments, drawn from above tobacco legislation descriptives. Specific examples of implementation strategies associated with each instrument are also reported.

The first step in making use of the instrumental approach is to group policy instruments according to dominant underlying attributes. For example, while warning labels and educational campaigns represent different avenues to tobacco control, as policy instruments they share attributes of providing consumers with information, allowing them to decide for themselves whether and how much risk is acceptable

TABLE 1 **Summary of European Policy Instruments to Control Tobacco, 1970- 2000**

Policy Instrument	Implementation Examples
<i>Advertising</i>	<p>Partial restrictions or bans on cigarette ads across newspapers, magazines, radio billboards, points-of-sale, and television.</p> <p>Regulation of advertising content and sponsorship.</p> <p>Limitations on advertising where minors are present, including schools and movie theaters.</p> <p>Ban on free samples of tobacco.</p>
<i>Sales</i>	<p>Minors⁶ banned from purchasing tobacco in shops or vending machines.</p> <p>Tobacco sales not permitted in proximity to schools, premises where minors are likely present, or healthcare facilities.</p> <p>Ban on selling tobacco products through vending machines.</p>
Environmental Tobacco Smoke (ETS)	<p>Restriction on smoking in public spaces, in proximity to childcare facilities, hospitals, outdoor arenas, and international and domestic flights.</p> <p>Workplace protection of non-smokers. Designated smoking rooms required.</p> <p>Establish standards for dual-ventilation systems.</p>

⁶ Most member states designate those under 18 as ‘minors’, concerning the purchase of tobacco products (exceptions include Spain and Italy where a minor is designated under 16).

TABLE 1 Continued.

Policy Instrument	Implementation Examples
<i>Ingredients</i>	<p>Establish list of permitted and prohibited ingredients allowed in tobacco products.</p> <p>Standards established for ingredients of cigarettes classified as low nicotine and tar, light, or mild.</p>
<i>Health Warnings</i>	<p>Warning labels required on cigarette packs, tobacco advertisements, and points-of-sale.</p> <p>Strong warning labels required linking smoking to death and disease, sanctioned by government health official.</p> <p>Rotation requirement for warnings on cigarette packs.</p>
<i>Capacity-Building</i>	<p>Grants of authority to agencies or councils to monitor industry compliance to government regulations.</p> <p>Establishing protocol for monitoring established ingredient standards.</p>
<i>Educational Campaigns</i>	<p>Development of public information programs regarding tobacco use.</p> <p>Adoption of health education curriculum which includes dangers of smoking initiation and benefits of smoking cessation.</p> <p>Information on tobacco use made available to staff of public educational institutions by school physicians.</p> <p>Establish national advisory board for deciding and disseminating information on tobacco consumption.</p>
Source: Shafey et al, 2003	

(*information*). The remaining instruments (sales, ETS, ingredients, capacity-building, advertising) share attributes of setting standards for what is permitted, and for building control mechanisms to ensure compliance (*command – control*) in the regulation of tobacco.⁷

The second step is to determine empirically whether these policy instruments converge on common underlying notions.

TABLE 2 Principal Component Factor Analysis of Tobacco Control Policy in European Union Countries: 1970-2000.⁸

Policy	Factor Loadings	Policy	Factor Loadings
<u>Command-Control:</u>		<u>Information:</u>	
<i>Advertising</i>	.788	<i>Health Warnings</i>	.755
<i>Sales</i>	.839	<i>Educational Campaigns</i>	.755
<i>ETS</i>	.804		
<i>Ingredients</i>	.875		
<i>Capacity-Building</i>	.914		
Retained Factors	1	Retained Factors	1
Eigenvalue, Factor 1	3.57	Eigenvalue, Factor 1	1.13
N	420	N	420
Cronbach's α	.886	Cronbach's α	.272

Principal-component analysis conducted with STATA 9.0.

⁷ Additional discussion of command-control and informational policy instruments is offered in Chapter IV.

⁸ Fourteen EU countries are included in all factor analyses reported in this chapter: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Portugal, Spain, Sweden, Netherlands and the United Kingdom. Luxembourg is not included due to data limitations.

Principal component analysis is appropriate for this purpose. I explore two strategies. First, I apply principal component analysis based on the theoretical distinction between command-control and information policies coming from the regulatory policy literature. Command-control policies, for example, are correlated. A factor analysis (Table 2) of instruments aimed at restricting tobacco advertising, sales, environmental tobacco smoke, cigarette ingredients, and provisions for capacity-building and accountability indicates that a single factor accounts for over 70 percent of variation with each factor loading at .78 or higher.

Similarly, a factor analysis of information policies which provide health warnings and authorize educational campaigns indicates that a single factor accounts for over 56 percent of variation with each factor loading .75 or higher. The scale reliability coefficient among information instruments, however, calls into question whether this is the most appropriate way to categorize these policies.

The second strategy assumes no theoretical distinction among policies in the area of tobacco control in Europe. I am interested in whether the collective behavioral attributes of non-price policies represent another succinct way to determine how policies and outcomes are connected. Instead of running two separate factor analyses, I perform one factor analysis of all policies using two rotations: unrotated factors and oblique-rotated factors. Table 3 reports findings from the unrotated analysis. Of the four factors retained, a single factor accounts for 88 percent of variation with each factor loading at .75 or higher. This provides one possible measure of policy scope that may be useful in further empirical analysis.

TABLE 3 Unrotated Factor Analysis of Tobacco Control Policy in European Union Countries: 1970-2000.

Policy	Factor Loadings
<i>Advertising</i>	.778
<i>Sales</i>	.750
<i>ETS</i>	.766
<i>Ingredients</i>	.841
<i>Capacity-Building</i>	.915
<i>Health Warnings</i>	.804
<i>Educational Campaigns</i>	.630
Retained Factors	4
Eigenvalue, Factor 1	4.27
N	420
Cronbach's α	.893

Principal-component analysis conducted with STATA 9.0.

Table 4 reports findings from the oblique analysis. Oblique rotation is an improved method of analysis over un-rotation in this context because oblique rotation assumes items included in the analysis are correlated.⁹ A single factor accounts for over 65 percent of the variation with each factor loading .63 or higher. Factor scores from Table 4 are used as a measure of policy scope in Chapter IV and Chapter V. I choose these over

⁹ Correlation is assumed in the case of European tobacco control because many of these policy interventions are adopted simultaneously across countries and they cannot be thoroughly disentangled with available data. Despite not having ideal data, I am able to continue advancing a test of an instrumental theory of public policy by considering a measure of policy scope. I will compare this measure to those developed in Table 2 in Chapter III.

**TABLE 4 Principal Component Factor Analysis with Oblique Rotation:
Tobacco Control Policy in European Union Countries: 1970-2000.**

Policy	Factor Loadings
<i>Advertising</i>	.813
<i>Sales</i>	.774
<i>ETS</i>	.803
<i>Ingredients</i>	.852
<i>Capacity-Building</i>	.919
<i>Health Warnings</i>	.828
<i>Educational Campaigns</i>	.630
Retained Factors	1
Eigenvalue, Factor 1	4.56
N	420
Cronbach's α	.893

Principal-component analysis conducted with STATA 9.0.

Table 3 based on the assumption of correlation advanced by oblique rotation within principal component analysis (Nunally and Bernstein, 1994).

In conclusion, there are seven main non-price policy instruments which have the purpose of influencing cigarette demand: restrictions on environmental tobacco smoke, sales, advertising and promotion, product health warnings, product control through ingredients, capacity building for regulatory compliance, and educational campaigns on dangers of tobacco consumption. These policy instruments can be analyzed two ways: First, they can be presented as theoretically distinct according to whether they converge

on common notions of information and command-control. While this is the preferred strategy for testing the theory presented in Chapter II, modifications may have to accommodate the realities of policy adoption in this context and data limitations.

Secondly, data reduction strategies can be used to account for simultaneous adoption and correlation, which produce a measure for overall policy scope. I test an instrumental theory of public policy using and comparing both strategies in the next two chapters as I explore further the effectiveness of policy instruments in curbing consumption.

CHAPTER IV

TOBACCO CONTROL AND HEALTH GOVERNANCE

Chapter III illustrates which tobacco control instruments are employed across Europe at the member state level using historical analysis. Additionally, Chapter III organizes tobacco control efforts into policy instrument categories and discusses how they are related to policy outcomes by way of economic theories of supply and demand, given various demand elasticities. Chapter IV incorporates information from previous chapters to conduct an empirical analysis of determinants of tobacco consumption across the European Union from 1970-2000. This chapter, along with Chapter V gives a more complete picture of tobacco policy effectiveness by exploring individual and multiple interventions, along with overall policy scope and supranational considerations for policy performance.

First I discuss how tobacco policy interventions can be understood as mechanisms of governance to improve European public health. Secondly, I introduce a model of policy effectiveness which considers the independent influence of price and non-price policy instruments, as well as their combined influence on consumption. I develop policy measures consistent with the instrumental view presented in Chapter I, while also taking into account the influence of the policy environment. Finally, I present findings and implications for European tobacco control specifically, and the study of comparative public policy, generally.

Tobacco Policy Interventions as Mechanisms of Governance

Assessing how public policies govern public health begins with the argument that policy instruments are governance mechanisms. Policy is one expression of the relationship between states and societies in a modern system of governance. For example, policies may reflect how governments respond to balancing rights of individuals with broader notions of public protection when the greater public health is at risk.

The response of health outcomes to various public policies depends in part on which instruments are used and how amenable the policy environment is to creating a context of support. In this section, I establish how a logic of governance is useful for evaluating and comparing policy outcomes. These ideas shape the empirical model of policy effectiveness of tobacco control in the multilevel environment of the European Union.

The first portion of the chapter introduces the concept of governance and how it applies to multilevel settings of policymaking. Secondly, I link policy instruments as governance mechanisms to overall policy performance by developing a model for tobacco policy effectiveness. Thirdly, I develop and empirically test several hypotheses related to propositions in Chapter II. Finally, I discuss the implications for an instrumental theory of public policy and introduce how certain features of the multilevel context of European Union may influence effective national strategies for controlling tobacco.

Governance

The scholarly use of the term ‘governance’ has evolved over the last half century. However, the most consistent characterization of the concept is its functional capability, or its mechanisms. Governance represents the combined functions of state and non-state actors and policies in affecting target populations in pursuit of policy goals (Kjær, 2004).

In organization theory, governance is the combined contribution of management, the environment, structure, clientele characteristics and core processes in pursuit of organizational success (Lynn et al. 2001). A similar notion of governance is applied in bureaucratic agencies, but with more attention given to political actors, values and institutions in the environment. For example, bureaucratic values such as accountability, efficiency and equity are held by individuals and organizations. These values can be mechanisms for shaping how agencies go about their work and can guide how successful agencies are at performing core tasks (Meier, 1993).

In the political sphere, political property rights and transaction cost politics are mechanisms of governance used by rational political actors when operating within the constraints of irrational political organizations. Similarly, contracts and the market represent mechanisms of governance in the economic study of organizational life (Williamson, 1996). Agreements made during the contracting period, for example, guide the behavior of organizations, agencies and individuals in their search of optimal performance (Llewellyn, 1931; Alchian and Demsetz, 1972; Macneil, 1974; Jensen and Meckling, 1976). A number of governance mechanisms are used to manage transaction-cost politics. For example, agency design, rulemaking procedures and structures for

controlling the bureaucracy represents factors which can affect policy implementation and performance (McCubbins et al, 1987, 1989; Moe, 1990; Meier and Waterman, 1997; Wood and Bohte, 2004).

These examples point to the proliferation of governance mechanisms, especially those which are likely to affect policymaking and outcomes.

Governance Mechanisms, Multilevel Systems and Policy Outcomes

Policy outcomes can be a function of national and supranational governance strategies in the European Union. First, policy instruments can come exclusively from national or supranational levels of government or they can be the result of combined efforts. In the case of tobacco control, every European country had adopted exclusive national policies towards tobacco before supranational directives were instituted (Shafey et al, 2003). A comprehensive evaluation of tobacco control in Europe must provide a way to account for the impact of governance strategies from multiple levels of government.

The policy instrument framework introduced in Chapter II provides a way for thinking about how these different policy efforts contribute to outcomes. It is important to know how policy instruments function in order to build proper models of policy implementation. Even if a policy is implemented properly it still may fail if the instrument is inappropriate (Meier and Licari 1998). Therefore, before turning to complex implementation theories, it is useful to find out how much of the policy effects can be explained simply by instrument performance.

Lowi's (1964) work was among the first to target policy tools as significant political phenomena. In fact, his four-fold classification of policy types (distributive, redistributive, regulatory, and constituent) provides a framework for understanding dynamic political consequences of varying policies. However, in order to further evaluate the richness and complexity of certain policies, it is essential to move beyond general policy typology frameworks and begin investigating how multiple instruments achieve particular policy goals (Schneider and Ingram, 1990). Whether national or supranational, tobacco control policies and directives have behavioral attributes.

Concern over policy instrument effectiveness in politics is consistent with that in several disciplinary arenas. For example, economists evaluate levels of economic stimulus or constraint based on the utilization of fiscal or monetary policy instruments (Woolley, 1988; Ott and Ott, 1968). Business management scholars investigate role of patent protection and product standards in explaining research and development funding and industry success or failure (Joglekar and Hamburg, 1983). Demographic specialists focus on the influence of population policy instruments in achieving desired fertility and social development (Pritchett, 1994; Carmen and Potter, 1980).

In political science the discussion of policy instruments has been "incidental rather than a matter of central concern" (Schneider and Ingram, 1990, p. 512). This deficiency has motivated scholars to refocus attention on the comparative effectiveness of different individual instruments (McDonnell, 1988; Gormley, 1987; Salmon, 1981). The result has been the development of different policy instrument classification systems. The most common is Schneider and Ingram's (1990;1997) fivefold

differentiation of: 1) authority, 2) sanctions and inducements, 3) capacity building, 4) exhortation and 5) learning. These categories were constructed by Schneider and Ingram upon analyzing the work of Bardach (1979), Almeria (1987), Gormley (1987) and McDonnell (1988) who suggest policy instruments can be labeled a number of ways, including as prescriptive, enabling, coercive, catalytic, hortatory, mandatory, inducements, and system changing.

The ideal method for testing an instrumental theory of public policy is to capture the attributes of each policy instrument (both national and supranational) in a dataset and determine their unique influence on policy outcomes. Unfortunately, the complexities of policy adoption are such that taking that strategy results in a high potential for collinearity due to simultaneous adoption of policy instruments over time and across member states. Therefore, two approaches are taken to produce evidence testing an instrumental theory of public policy. First, I develop a model using a measure of policy which distinguishes among information and command-control instruments. I also explore how price policies work in combination with these instruments. Secondly, I develop a model using a policy-bundle approach where I create a single measure of non-price policies (policy scope) and combine it with price policies. I discuss implications for using a more aggregate measure of non-price policies on understanding an instrumental approach to policy effectiveness.

Tobacco Control and Policy Instrument Effectiveness

Tobacco control is a fertile policy environment in which to study the relative effectiveness of individual and multiple policies. First, tobacco is everywhere. It is consumed and controlled in every member state and at the supranational level. Therefore, variations in policies and outcomes at all levels provide leverage on addressing the following general research question: *how are health policy outcomes governed by policy instruments in a multilevel system of policymaking?*

Secondly, this policy area provides the opportunity for investigating the effectiveness of price and non-price policy instruments targeting one variegated population. Finally, this policy context allows me to identify instances where policies are working, and under what circumstances.

Developing a Model for Tobacco Policy Effectiveness

There is a growing concern over population health governance as over half a million people within the European Union die each year due to tobacco-related illnesses and diseases, especially those associated with cigarette smoking (Aspect Consortium 2004). The tobacco epidemic has caught the attention of policymakers at all levels of government. They seek ways to mitigate rising negative health consequences associated with consumption, morbidity and mortality (Aspect Consortium, 2004).

Policymakers often intervene in the marketplace when public health is at risk. In fact, they often try to mediate adverse health effects by choosing command and control policies to regulate food and drug products, medical procedures, alcohol, *and* tobacco.

Aside from Meier and Licari (1998) and Licari (2000), limited empirical work has focused on evaluating the effectiveness of multiple policy instruments in the area of tobacco and health. Although largely descriptive, Studlar (2002) has explored the transfer of policy instruments used for tobacco control in the United States and Canada. Studlar contends that tobacco-control policy research focuses on five main policy instruments: regulation (command and control), finance, capacity building, education, and learning tools. Each instrument includes sub-areas of interest.

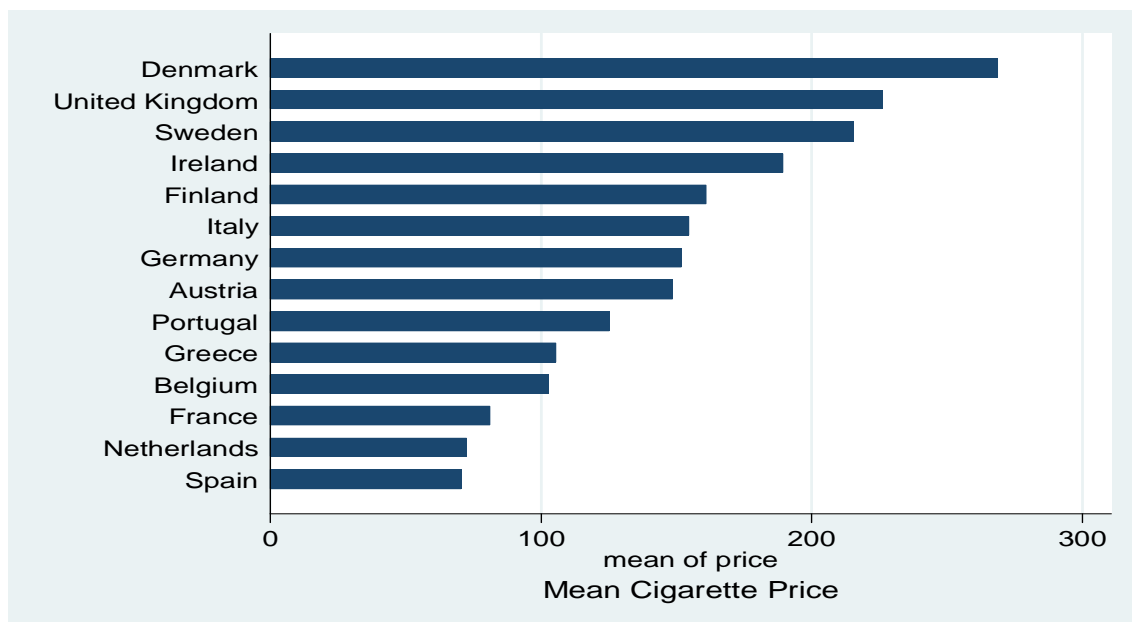
Regulatory tools target tobacco advertising, sales, environmental smoke, and product ingredients. Financial policy tools propose taxes or levies on tobacco products, manipulate agricultural incentives, promote litigation against tobacco manufacturers, and address the incentives for smuggling (Studlar, 2002; Pal and Weaver, 2002). Capacity building refers to funding for community development of programs to combat tobacco use, establishing health councils to monitor tobacco industry activities, and grant authority to agencies or councils to monitor industry compliance. Education and learning tools include health warning labels, general anti-smoking campaigns, development of public health curricula, and can subsume legislative hearings and executive reports related to tobacco control.

These categories capture mostly non-price policy efforts. Licari (2000) and Meier and Licari (1998) make a case for the importance of studying both non-price and price policies when developing empirical models of tobacco control.

Cigarette Price-Policy

The most common regulatory device for controlling tobacco is through taxation. Taxes on cigarettes work causally by affecting the price of cigarettes (Chaloupka and Warner, 1999; Licari 2000). Tobacco taxation varies a great deal across Europe. Figure 4 demonstrates the variation in average price of cigarettes across Europe, 1970-1980.

FIGURE 4 Mean Cigarette Price per Pack (US Cents): 1970-1980



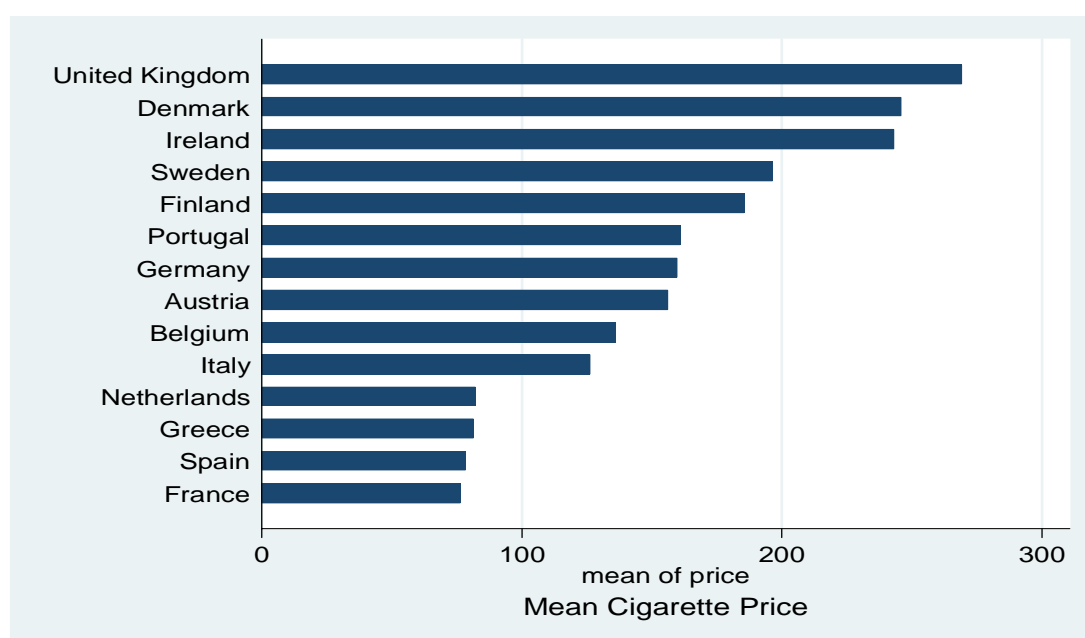
Source: OECD National Accounts (2006).

During this decade Denmark and the United Kindgom are leaders on real price of a pack of cigarettes. France, Spain, and Netherlands come last, with cigarettes costing

approximately one-third that of Denmark and the UK. The average range of cigarette prices across Europe spans around \$0.55 in Spain, to \$2.60 in Denmark.

From 1980-1990, the range of cigarette prices remains roughly the same, from \$2.60 in the United Kingdom to \$0.55 in France and Spain. Figure 5 reveals that

FIGURE 5 Mean Cigarette Price per Pack (US Cents): 1980-1990



Source: OECD National Accounts (2006).

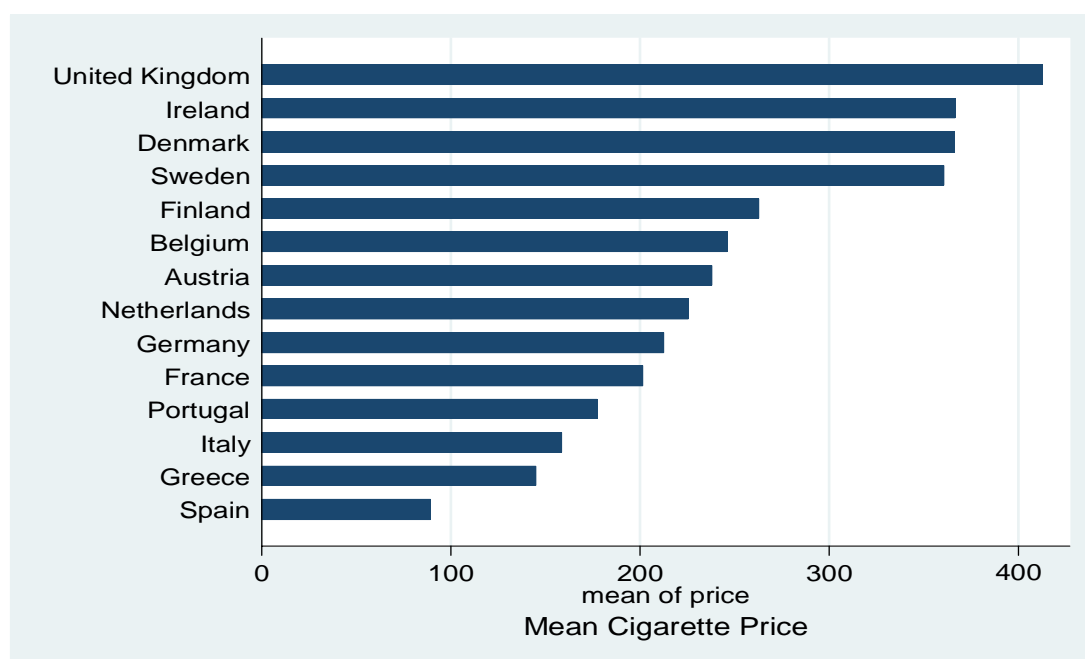
Ireland replaces Sweden in the top three countries with cigarettes per pack over \$3.00:

United Kingdom, Denmark, and Ireland. Portugal and Belgium are the biggest cost

movers (increase) from the previous decade, while Denmark, Sweden, Italy, and France all experience a drop in the cost of cigarettes. Germany and Austria undergo only slight changes over the decade.

In the final decade included in this study, 1990-2000, price leaders continue to be the United Kingdom, Ireland, Denmark and Sweden. Figure 6 shows how the cost of cigarettes goes beyond \$4.00 a pack in the United Kingdom. Also, the number of countries in the \$2.00 to \$3.00 range doubles from the previous decade.

FIGURE 6 Mean Price for Cigarette Packs (US Cents): 1990-2000



Source: OECD National Accounts (2006).

Spain and Greece continue to lag with price increases, while France makes the biggest price increases, more than doubling the price of a pack of cigarettes from the average in the previous decade.

Taken together, these figures descriptively demonstrate the variation in average price for a pack of cigarettes across Europe from 1970-2000. Ultimately, taxation (and therefore price increases) controls tobacco consumption by manipulating demand for the addictive commodity (see Chapter III). To the extent that demand elasticities can be moved, tobacco economists argue that price policies are the most effective mechanism for reducing tobacco consumption (Chaloupka 1991, 1997; Warner et al 1995; Wasserman et al 1991). Under this argument, price policies are inversely linked to consumption levels:

Hypothesis 1: Increases in cigarette price reduce demand for cigarettes.

Therefore, consumption is modeled as a function of price:

$$O = f(\text{Price-Policy}) \quad [1]$$

where O is some policy outcome, cigarette consumption, modeled as a function of the price of cigarettes, which reflect taxation changes. While this argument [1] has merit, it is critical to consider countervailing messages sent to consumers when governments use tobacco taxation as a deterrent: 1) cigarette taxes provide useful revenue for government, so consumption is profitable and 2) price increases are meant to deter consumption of an unhealthy commodity.

Price policies act as uniform market mechanisms with the goal of making it in consumers' self-interest to reduce consumption. The overarching goal is to use price mechanisms to deter demand of a product, without having to communicate a strong statement of preference over whether a product cannot or should not be consumed or banned. The consumer still has the choice of buying and smoking cigarettes if willing to pay a higher price. Material costs include both those expended at purchase, as well as those associated with future health problems. In liberal democracies where governments often bear a portion of the cost in providing health coverage, this is a decision the government hopes the consumer takes seriously. Many consumers do not consider future risks and therefore operate according to what the tobacco economics literature terms imperfectly rational addiction models of consumption (Elster, 1979; McKenzie, 1979; Winston, 1980; and Thaler and Shefrin, 1981). In order to curb consumption in such circumstances all European countries have initiated non-price policies alongside taxation.

Non-price Tobacco Policies

Price policies dominated tobacco control efforts across Europe until the early 1980s in most countries, and into the 1990s in places like Austria. The diffusion of health information across the developed world, especially that from the 1964 U.S. surgeon's general report, led governments to begin considering specific health risks associated with smoking cigarettes. This led to the formation and adoption of non-price

instruments to regulate the advertising of cigarettes and environmental smoke, as well as to inform citizens of health risks by using information tools such as warning labels on tobacco products. Table 1 in Chapter III captures seven non-price policy instruments used to control tobacco in Europe. They are: advertising, sales, environmental tobacco smoke, ingredients, health warnings, capacity-building, and educational campaigns.

In the tobacco literature it is common to conduct descriptive policy analysis of the potential impact of a single policy. Examples include studies of the marketing policy outlined in the master settlement agreement between Big Tobacco and the United States (Slade 2001), regulation of nicotine delivery systems (Warner et al 1996; Cromwell et al 1997), restriction of cigarette sales to minors (Rigotti, 2001), and implementation of state clean indoor air laws (Schroeder, 2004). However, these policies are often adopted and implemented within a larger social regulatory context where other regulations are already in effect and policy environments differ with respect to how they support policy efforts.

Meier and Licari (1998) and Licari (2000) were first to respond to this concern by evaluating the effectiveness of tobacco control when policies are implemented in combination. Three key U.S. federal policies are analyzed in combination: cigarette taxation, cigarette package warning labels (effective January 1, 1966; Fritschler and Hoefler 1995), and the television advertising ban in 1971. The proliferation of policy instruments across Europe from 1970-2000 makes clear the need for a finer determination of what works and how. I build on Meier and Licari's (1998) framework

to address this need. Within that framework, there are seven main instruments of tobacco control. Many of these policies share behavioral assumptions. These underlying characteristics enable me to account for European tobacco control efforts using combined indicators which reflect common underlying notions by isolating shared variance among multiple policy instruments.

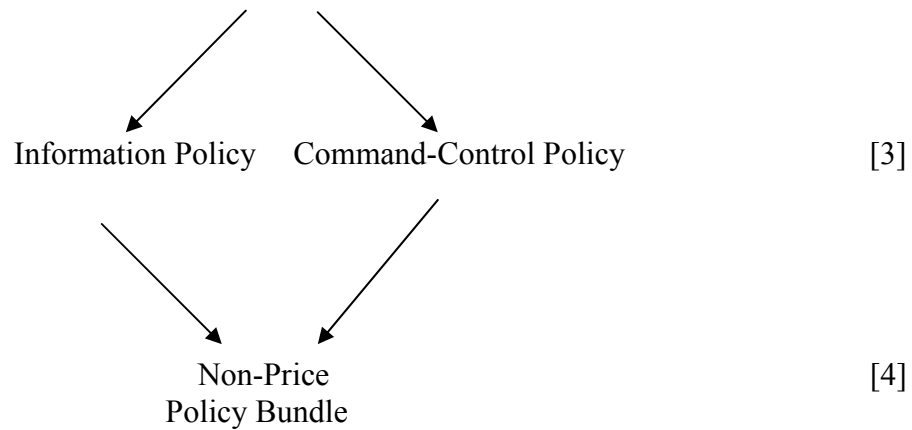
In building a model of comparative public policy, it is important to first identify those policies relevant to the outcomes of interest (e.g., tobacco consumption), and then to think about associations among policies. In [1] above I start building a model of European tobacco control effectiveness, focusing on price policies. Non-price policies are added to that model:

$$O = f(\text{Price-Policy}, \text{Non-Price Policies}) \quad [2]$$

where O is some policy outcome, cigarette consumption, modeled as a function of the price of cigarettes, and non-price policies which are identified qualitatively (see Table 2, Chapter III). These non-price policies [2] alter demand curves of smokers and can be broadly sorted conceptually two ways: a) according to whether they convey information, or whether they are command and control regulation [3] or b) according to whether their behavioral attributes can be captured as a non-price policy bundle [4].¹⁰

¹⁰ This strategy is useful when simultaneous policy adoption makes it difficult to disentangle certain specific policy-effects given data limitations.

$O = f(\text{Price-Policy, Non-Price Policies})$



Information Policy

Like the United States, in Europe the foremost battle to control tobacco from both the perspectives of industry and government is on the control of information about tobacco products. Many governments wish to uncover and disseminate harmful information about tobacco products, while industry representatives work to suppress, manipulate, or constrain information touting harmful information of their products. Information instruments help governments build negative information campaigns which support an overall emphasis on governing and protecting the public health of citizens. While information policies can be costly, and heavily dependent on whether they are ignored by consumers (Meier and Licari, 1998), many governments use them to aid in governing public health.

The most notable implementation example is the requirement of warning labels on cigarette packages. Notwithstanding voluntary agreements, warning labels began to appear in national-level legislation around the 1980s across Europe. Chapter III illustrates the variety of labels adopted, some only hinting at possible harmful effects, others passing along strong and specific dangers of smoking.¹¹ As of the late 1990s all western European countries require warning labels by law to appear on cigarettes packages (Aspect Consortium, 2004).

Other methods of implementing information include national educational campaigns designed to disseminate information on smoking and public health. While most European countries likely have anti-tobacco educational campaigns supported by state and local governments and non-governmental entities, three countries in the European Union have national legislation supporting the dissemination of the dangers of tobacco: France, Spain, and Sweden (Shafey et al, 2003). While coverage on educational campaigns varies by country, these initiatives add to overall negative information policy emphasized and enforced at the national level.

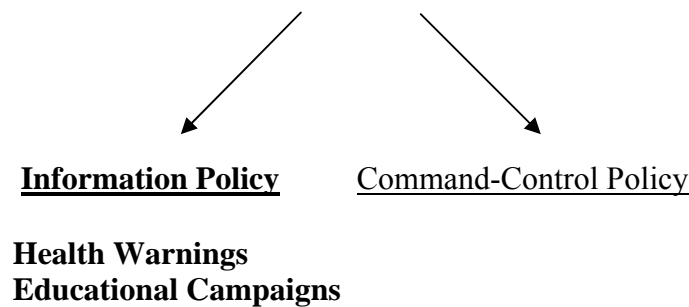
While warning labels and educational campaigns represent different avenues to controlling tobacco, as policy instruments they share attributes of providing consumers with information, allowing consumers to decide for themselves whether and how much risk is acceptable. Policy outcomes, therefore, are expected to respond to regulatory efforts aimed at providing information:

¹¹ In Chapter VI, I introduce more recent efforts by the European Union to regulate negative information via labels on cigarette packages.

Hypothesis 2: Cigarette demand will diminish as governments adopt policy instruments aimed at correcting information asymmetries associated with tobacco products.

Now the comparative model [4] is expanded to include these factors:

$$O = f(\text{Price-Policy, Non-Price Policies}) \quad [5]$$



Command-Control Policy

In addition to information policies, governments choose among command and control (CAC) policy instruments once specific intent to regulate is settled. Tobacco control is no exception. Across the European Union, CAC policies have been used to restrict the advertising of tobacco products, primarily across television and radio media. Though, some restrictions are also enforced across subsets of print media. These policies are designed to restrict, or at least constrain, the information provided by tobacco companies to sell products to consumers.

Substantial CAC efforts have also been directed towards setting standards and restrictions on the ingredients of tobacco products, primarily manufactured cigarettes. Limitations are often placed on tar and nicotine yields, as well as on additives which make the product more appealing and addictive. Ingredients are often required to appear on cigarette packs, so that tobacco companies are held accountable for their contents, if/when tested. These labels also communicate information to consumers, though they are often ignored or hard to understand. Most consumers do not know how to calculate risk based off information reported on labels.

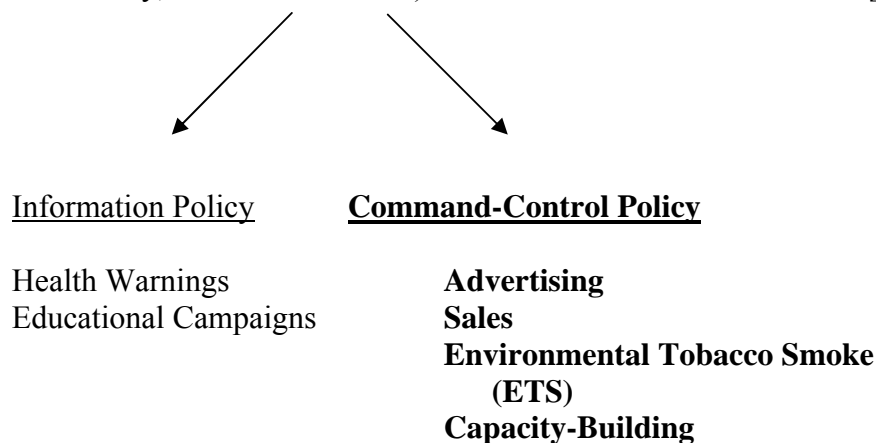
Setting standards for the restriction of tobacco sales is another CAC effort. Minors can be restricted from purchasing or consuming cigarettes in retail stores or from vending machines. These policies are designed to curb consumption by restricting access to the product. Finally, governments set standards for controlling environmental tobacco smoke in public buildings, in transportation vehicles, or in areas where minors are present (see Chapter III for more implementation examples).

While each of these CAC efforts represent different avenues to control tobacco, as policy instruments they share attributes of setting standards for what is permitted, and for building in control mechanisms to ensure compliance (see capacity-building instruments in Chapters III and VI). Policy outcomes are expected to respond to those instruments which set specific standards and build capacity for regulation:

Hypothesis 3: Cigarette demand will diminish as governments adopt policy instruments which standardize regulatory efforts and create capacity for ensuring compliance.

This differs from information policy instruments which correct information inefficiencies so that consumers can decide for themselves whether and how much risk is acceptable. Now the comparative model [6] is expanded to include CAC factors:

$$O = f(\text{Price-Policy, Non-Price Policies}) \quad [6]$$



Multiple Interventions

The regulatory environment for tobacco often includes non-price and price-control efforts aimed at shifting demand. While combined policy efforts may seem progressive, policymakers often rush to adopt multiple instruments without consideration for how they may detract from overall effectiveness when executed in combination. Meier and Licari (1998) are the first to consider how instruments work

when used in combination. They argue as non-price regulation is added, less-addicted smokers are skimmed off, leaving a pool of highly addicted smokers, making demand for cigarettes more inelastic to price. I test this argument in the context of European tobacco control:

Hypothesis 4: When information policy instruments are added to the regulatory setting, the effectiveness of price as a disincentive diminishes.

Hypothesis 5: When command-control instruments are added to the regulatory setting, the effectiveness of price as a disincentive diminishes.

Another extension of Meier and Licari's (1998) formal postulate is to test their hypothesis on the interaction between command-control and information policies. Since I do not have a theoretical expectation for this interaction, I do not test it empirically.

Habit Persistence: Robust Contextual Factor

While both price and non-price policies are ultimately designed to effect consumer demand for tobacco, the unique characteristic of tobacco products is their addictive quality. This trait makes shifting demand curves difficult since smokers range from highly addicted to not addicted.

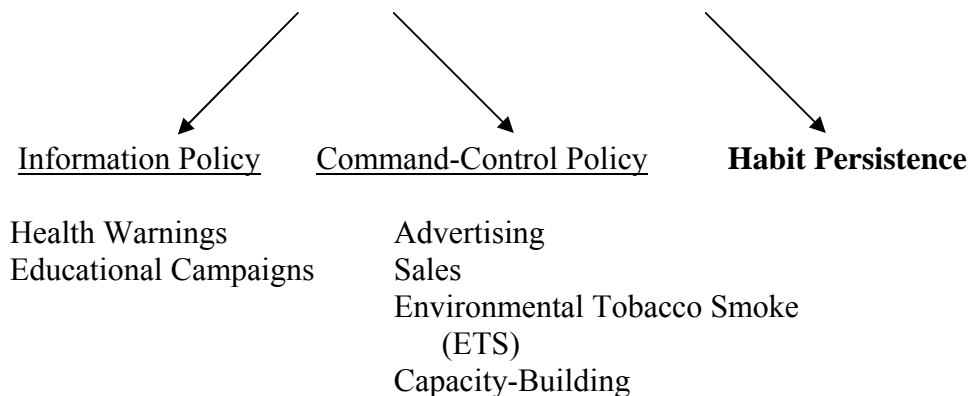
Within the tobacco control literature, habit persistence is typically taken into account by including a measure of past consumption (Chaloupka and Warner 1999;

Becker and Murphy 1988; Lewit, 1989; Meier and Licari 1998). When controlling for price, habit persistence can also be taken as demand elasticity for tobacco products. The closer to 1 this number is, the more inelastic demand for this addictive commodity. Conceptually, habit persistence captures direct levels of demand, as well as more indirect moods in the population where declining consumption may indicate decreasing popularity of legitimacy of smoking (Licari, 2000).

Hypothesis 6: As habit-persistence intensifies, current demand and consumption of tobacco products increase.

To be aware of addiction when determining the effectiveness of tobacco control brings to light the importance of incorporating knowledge of the substantive policy area when developing a model. The following addition is made to the comparative policy model [7] of tobacco control effectiveness:

$$O = f(\text{Price-Policy, Non-Price Policies, } \mathbf{\text{Robust Contextual Factors}}) \quad [7]$$



In Chapter I, I contend that policy effectiveness depends not only on appropriate selection of policy instruments; policies are conceived of and implemented within policy environments. Whether the policy environment is supportive of tobacco control influences the extent to which these price and non-price policy instruments lead to effective intervention. Bureaucratic, industrial, and political forces are three dimensions of the policy environment which enable and constrain policy effectiveness.

Bureaucratic Influences

An instrumental view of policy effectiveness takes into consideration how bureaucracies influence policy outcomes. Bureaucracies generally exercise their influence in policymaking because they are inherently involved with government regulation of industry (Meier, 1993).

During the time period under examination, 1970-2000, the most influential bureaucracy with a stake in the politics of tobacco across Europe is the public health bureaucracy. The presence and strength of public health bureaucracies across member states should have two important influences on tobacco control outcomes. First, they are uniquely positioned to provide information to the public on health risks associated with smoking, thus reducing consumption. Secondly, they can influence political actors to increase the scope and severity of price and non-price policy efforts to reduce smoking. Such actions align with policy agendas focused on improving public health in an area where health is aggressively under assault. Additionally, bureaucracies utilize various resources (budget allocations and personnel, for example) to pursue their policy agendas

(Rourke 1986), according to their capacity. Increased capacity should lead to efforts aimed at governing (improving) public health, by reducing consumption of harmful products like cigarettes. Bureaucratic capacity, specifically via resources, is linked inversely to policy outcomes:

Hypothesis 7: As public health bureaucracies increase their capacity (expenditures) to align efforts with policy agendas focused on improving public health, cigarette demand will diminish.

Industry Influences

Tobacco companies and subsidiaries are present in every European Union member state (Harvard School of Public Health, 2001). While a stronger industry presence can be accounted for in Great Britain, Germany, Italy, and Greece (for production, manufacturing, and distribution), the positioning of tobacco firms across the European Union is pervasive (United Nations Food and Agricultural Organization, 2005). This is not to say there are many – in fact, there are only a few firms. They are simply spread across the Continent in various ways.

Given this presence, industry involvement in the politics of tobacco comes with the goal of limiting the extent to which policies regulate its products, especially manufactured cigarettes. The industry has a comparative advantage when exerting itself politically to constrain, even thwart, policy efforts to reduce consumption. With relatively few firms, organizing becomes easier because the collective action problem is

curtailed (Olson 1971). Smaller numbers lower the costs of organizing and ensure greater benefits for each individual member (Olson 1971).

Even more, institutions structure the pattern of influence exerted by organized groups in the policymaking process, which has relevant implications for policy outcomes. For example, pluralist versus corporatists institutional structures make a difference for how these groups are involved in the policy process and how they are integrated with other peak organizations at the national level (Schmitter 1982; Lijphart 1999).

While the subject of pluralism and its contrast with corporatism has been a major focus of interest group politics in the comparative arena (Almond 1983; Wilson 1990), less attention has been given to policy outcomes resulting from these institutional-guiding processes. I posit that organized groups from the tobacco industry have more success at protecting themselves from regulation in those arenas where they can use uncoordinated pluralist arrangements to exercise their comparative advantage in organizing, where the potential for integration into the policy process (and fusion to government representatives) is less formal, and where the environment for policy concertation (Schmitter 1989) does not require a commitment to tripartite pacts with national peak organizations, which may dilute their (tobacco industry) message. Within pluralist arrangements, many groups traverse in and out of the political arena, often only making an appearance and not exerting an influence. Without a comparative advantage in organizing, exerting influence can be difficult because groups are not systematically

integrated into existing peak organizations (Lijphart 1999) (e.g., disparate public health advocacy groups).

Furthermore, the institutional structures of rigid corporatism (where interest groups are organized into hierarchical, monopolistic, specialized peak organizations) prevent access and integration of a multiplicity of interest groups into certain policymaking spheres. These positions are typically reserved for groups representing economic affairs (Pekkarinen et al, 1992), not social regulatory affairs, like those associated with tobacco control.

The enabling characteristics of pluralist interest group arrangements should have two important influences on policy performance of tobacco control. First, this arrangement allows tobacco firms to strengthen their bargaining position in the policymaking process (due to their comparative advantage in organizing over other groups), which stands to stabilize if not increase demand of their products. Secondly, being integrated into the political subsystem under these conditions allows tobacco firms the strategic opportunity not only to advocate their preferences, but also protect themselves from counter-positions, like those presented by public health advocates.

Under these circumstances the magnitude of regulatory influence on curbing consumption may be reduced or negated entirely.

Hypothesis 8: In member states where pluralist institutions guide tobacco industry involvement in policymaking, cigarette demand will increase.

Political Factors

Institutions which guide the interest group process can also be considered political factors. However, there are a number of other political factors to consider, though many of them do not provide tractable implications for policy outcomes. In covering approaches to tobacco control research, Chapter I explains how direct partisan political forces are not easily matched to preferences on tobacco control, nor are they stable determinants of tobacco consumption or cigarette tax rates when crudely measured (Licari 2000). In the case of the United States, political forces at the state level are reduced to whether a state is a “tobacco state”: one that grows or manufactures tobacco (Licari 2000). Across the European Union, however, tobacco firms and subsidiaries are present in every member state. It is not useful to apply this method (“tobacco state” designation) to EU member states.

Other than partisan political factors, there may be important political factors specific to the supranational arrangement of the European Union. Two important considerations are whether a policy mandate exists for governing public health at the European level, and the extent to which national governments have adopting EU legislation into their national laws and regulations regarding tobacco control. These two factors are considered in Chapter V.

Taken together, bureaucratic, industrial, and political forces comprise the policy environment portion of the comparative model of tobacco control effectiveness [8], which have implications for policy performance:

$O = f(\text{Price-Policy},$ [8]

- Cost of tobacco, tobacco taxation

Non-Price Policies,

- Information Policies
- Command and Control Policies
- Policy bundle

Robust Contextual Factors,

- Habit Persistence, Addiction

Policy Environment,

- **Bureaucratic Factors**
- **Industry Factors**
- **Political Factors)**

Measuring Concepts and Data

In the previous section, a comprehensive model is developed for determining how policy-related concepts are linked to policy performance in the arena of tobacco control in the European Union. While this model is portable as a more *general* model of comparative policy effectiveness, this section focuses on operationalizing and measuring concepts according to the model [8] in the European context.

Dependent variable. For model [8], the dependent variable of interest is the number of packs of cigarettes per capita consumed in each member state, 1970-2000.¹² Chapter I illustrates variation in cigarette consumption over time, and across space. Alternative dependent variables could include consumption of pipe tobacco, snuff, or hand-rolled tobacco cigarettes. However, because seventy-five percent of tobacco consumed in the European Union is in the form of manufactured cigarettes, the most valid policy outcome measure is *packs of cigarettes consumed per capita* in each member state, overtime (European Commission Employment and Social Affairs, 2000). Data related to tobacco consumption come from the *European Health for All* database.¹³

Price-Policy: Cigarette Price. Taxes are an important component of price, especially for regulated commodities. Cigarettes are taxed in a variety of ways. European taxation practices commonly combine excise taxes and value added taxes (VAT). These taxes are reflected in the real price of cigarettes, which are passed along to consumers. As such, the main price-policy indicator is the price of cigarettes per pack (US = 1990). Real cigarette prices have also been used in other quantitative studies (Becker and Murphy 1988; Barnett 1995; Meier and Licari 1998; Licari 2000). Data for cigarette prices come from two sources. Data from 1970-1990 come from *OECD National Accounts and Historical Statistics Detailed Tables* . Data for prices 1990-2000

¹² The following countries are included as part of European Union: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom. These comprise what is known as EU15, prior to 2004 enlargement.

¹³ This database is hosted by the World Health Organization – Regional Office for Europe.

are from the World Health Organization *Global Status Report on Tobacco or Health*.

Prices are adjusted for inflation.¹⁴

Policy Instrument Variables. Policy data come from two major sources: the *World Health Organization* and the *European Commission Directorate-General for Health and Consumer Protection*.¹⁵ For each European Union member state, tobacco legislation is coded according to which instruments are used. These are organized according to seven categories (see Table 1, Chapter III). Each policy instrument is coded as an intervention (Box and Tiao 1975; Meier and Licari 1998). Each intervention remains in the dataset unless rescinded by future legislation. Interventions accumulate over time in each category. The benefit of accumulated-intervention analysis is the preservation of information relating to the existing regulatory environment overtime, acknowledging that policies are adopted and remain in force, unless overturned by future regulation (Box and Tiao, 1975). This is an innovation in quantitative tobacco control research.

In order to reflect the theoretical expectation that policy instruments often converge on common underlying notions, combined policy indicators are created using factor analysis. Two strategies are employed. First, I apply principal component analysis based on the theoretical distinction made in the regulatory policy literature between command-control and information policies. The scale reliability coefficient among

¹⁴ These sources are comparable. Missing data points for all variables are handled using imputation calculations (for extensive review of the benefits of imputation in comparative public policy, see Granberg-Rademacker, 2005).

¹⁵ Specific by-country sources are referenced in Chapter III.

information instruments is, however, calls into question whether this is the most appropriate way to categorize these policies.

The second strategy assumes no theoretical distinction among policies, only that the collective behavioral attributes of non-price policies represent another way to determine how policies and outcomes are connected. One factor analysis is performed containing all policies using oblique-rotated factors. The retained scores represent a measure of policy scope. I report findings for both measurement strategies.

Robust Contextual Factors: Habit Persistence. Varying demand elasticities for cigarettes require the habit-forming nature of cigarette smoking to be considered. Within the tobacco control literature, the way to model addictive phenomena is via habit-persistence, that is, by including a lagged dependent variable as an independent variable (Chaloupka and Warner, 1999; Becker and Murphy 1988; Lewit, 1989; Meier and Licari, 1997). As with other independent variables, lagged dependent variables should only be included when theoretically appropriate, as is the case with cigarette consumption. Intuitively, incorporating a lagged dependent variable into a model places the entire history of the right hand side variables into the equation (Greene, 2003). In the case of cigarettes, all of the factors influencing past consumption are controlled for, highlighting the effect of new information.¹⁶

¹⁶ One possible statistical disadvantage is that even if errors are not autocorrelated, the lagged dependent variable may be correlated with disturbances, resulting in biased estimators. The degree of bias declines substantially as the number of observations increases relative to the estimated parameters. In the present case, the extent of the bias is unlikely to be large given the large N (400+) and the small amount of residual serial correlation.

Bureaucratic Factors. The main bureaucracy with a stake in the politics of tobacco in Europe is the public health bureaucracy. Public health bureaucracies utilize resources to pursue their policy agendas (Rourke 1986), according to their capacity. In order to capture bureaucratic capacity, a measure of public health expenditures is collected for each year, for each EU member state. This measure is the percentage of government health expenditures allocated for public health. These data come from the OECD (2003).

Industry Factors. Pluralist versus corporatist institutions structure the pattern of influence organized groups (the tobacco industry) exert in the policymaking process (Schmitter 1982; Lijphart 1999). A measure of interest group pluralism is applied from Lijphart (1999) and Siaroff (1999). This is a stable, overtime indicator based on a number of factors relevant to the pluralism-corporatism contrast (e.g. presence and strength of national peak organizations, process of policy concertation, centralization of wage-bargaining, strength of labor unions). The measure ranges from zero, pure corporatism, to four, pure pluralism. Table 5 illustrates the variation of this stable indicator across European Union member states. Pluralist institutions guiding the interest group process are most prevalent in Great Britain (3.50) and Greece (3.50), while more corporatist structures are more common in Austria and Sweden.

As posited earlier, the tobacco industry may be more likely to establish preferences and exercise influence in the policymaking process in more pluralist situations, rather than under corporatist conditions, in order to reduce the impact of regulations which reduce demand of its products.

TABLE 5 Interest Group Pluralism Scores, EU Member States

Country	Pluralism Score	Country	Pluralism Score
Great Britain	3.50	Germany	1.38
Greece	3.50	Netherlands	1.25
Spain	3.25	Belgium	1.25
Italy	3.00	Denmark	1.12
France	3.00	Finland	1.00
Portugal	3.00	Austria	.62
Ireland	2.88	Sweden	.50
<i>EU15 Average</i>	2.09		

Source: Based on data in Lijphart (1999, 313): 0 = pure corporatism, 4 = pure pluralism. Indicators are stable overtime, 1970-2000, with only cross-sectional variation (Lijphart 1999).

Methods and Data Structure

The units of analysis in this study are fourteen European Union member states: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, and United Kingdom. Data limitations prevent Luxembourg from being included in the analysis. Data from all fourteen countries are pooled over a thirty year period (1970-2000), creating 420 observations. I use panel data diagnostics and modeling techniques to estimate respective parameters.

Panel data sets for economic and social science research boast several advantages over conventional cross-sectional or time-series data sets (Hsiao, 1985). The most important advantage pertaining to this study is the leverage gained through econometric estimation and modeling processes. Pooled data provide a larger number of data points, increasing degrees of freedom and reducing collinearity among explanatory variables.

This allows for more efficient estimates and, therefore, more reliable inferences and generalization to the population. In order to ensure such benefits, particular attention is given to matters related to poolability, heteroskedasticity, autocorrelation, and stationarity.

Chow tests of common slopes (cross-section stability) support pooling across European Union countries (on this topic). However, to subsequently assume errors are homoskedastic is a risk. In fact, an amount of heteroskedasticity is expected given the differing variances of variables for subsets of countries. In order to constrain the bias of any nonrandom error, OLS models are estimated with panel-corrected standard errors (Beck and Katz, 2004). In addition, three series are tested for stationarity: cigarette consumption, cigarette price, and public health expenditures. It is possible these series will not revert back to a constant mean and variance given they can increase and decrease without bound (De Boef and Granato 1997). Therefore it would be consistent with the data generating process if they were determined to be non stationary.

Stationarity tests for panel data have advanced in the last five years. Until recently, it was common to combine individual unit root tests applied on each time series (i.e. Dickey-Fuller test, KPSS test, and the Phillips-Perron test) using, and reporting, a simple average across units. Unlike the single time series spurious regression literature which focuses primarily on whether a series exhibits any trend over time, panel data spurious regression estimates give a consistent estimate of “the true value of the parameter as both N and T tend asymptotically” (Phillips and Moon 2000; Baltagi 2005, p. 237). This has given rise to a number of panel unit root tests assuming cross-sectional

independence (Maddala and Wu 1999; Levin et al, 2002; Im et al, 2003) dependence (Pesaran, 2004; Moon and Pesaran 2004) and cointegration (Pedroni 2004; Larsson et al, 2001).

The Im-Pesaran-Shin panel unit root test is most appropriate for heterogeneous panels (Im, Pesaran and Shin 2003) and is employed in this case. All three series mentioned above are considered non stationary when this test is applied. Taking the first-difference is an appropriate correction for cigarette price. However, when first-differences of consumption and public health expenditures are taken, over differencing is evident in the full model: r-squared reduces to zero, the direction, magnitude, and significance of these two variables becomes confused. These are common signs of differencing when it is not needed. Doing so can generate a moving average process, which has implications for the general model (Mills 1990). In sum, cigarette prices are non-stationary or $I(1)$ and can be made stationary by differencing once. The other series remain partially integrated. To ensure this does not bias the results, residuals for every model are tested for stationarity, using the Im-Peresan-Shin panel unit root test.

Hypotheses

Using panel data analysis, I investigate the following hypotheses derived from expectations in previous sections:

Individual Instruments and Policy Performance:

Hypothesis 1: Increases in cigarette price reduce demand for cigarettes.

Hypothesis 2: Cigarette demand will diminish as governments adopt policy instruments aimed at correcting information asymmetries associated with tobacco products.

Hypothesis 3: Cigarette demand will diminish as governments adopt policy instruments which standardize regulatory efforts and create capacity for ensuring compliance.

Multiple Instrument Intervention and Policy Performance

Hypothesis 4: When information policy instruments are added to the regulatory setting, the effectiveness of price as a disincentive diminishes.

Hypothesis 5: When command-control instruments are added to the regulatory setting, the effectiveness of price as a disincentive diminishes.

Bureaucratic, Industry-Political, and Robust Contextual Factors and Policy Performance

Hypothesis 6: As habit-persistence intensifies, current demand and consumption of tobacco products increases.

Hypothesis 7: As public health bureaucracies increase their capacity (expenditures) to align efforts with policy agendas focused on improving public health, cigarette demand will diminish.

Hypothesis 8: In member states where pluralist institutions guide tobacco industry involvement in policymaking, cigarette demand will increase.

TABLE 6 Mapping Hypotheses onto General Propositions

Proposition: Description	Hypothesis: Number
<i>1b</i> : Policy outcomes are unlikely to decline in those countries where the tobacco industry has the opportunity to exert influence through pluralist interest-group structures.	8
2: Policy outcomes are likely to decline in those countries where implementation resources are available to support tobacco control efforts.	7
3: Policy outcomes are unlikely to decline in countries where addiction is more severe.	6
4: Policy outcomes are likely to decline in those countries where policy instruments overcome impediments to policy-relevant action.	1-5

Two additional hypotheses concerning policy scope are tested in extended analyses. For this chapter, these hypotheses map onto propositions coming from Chapter II the following way:

Findings

Table 7 reports findings for the effectiveness of policy on policy performance, taking into consideration individual and combined interventions and bureaucratic, industry-political, and robust contextual factors. I test three models: an information policy model, a command-control model and a combined policy model.

TABLE 7 The Effect of Policy Interventions on Tobacco Consumption in the European Union, 1970-2000

Independent Variables	Model 1 Information Policy	Model 2 Command-Control Policy	Model 3 Combined
<i>Policy Instruments</i>			
Information Policy	-1.131 (33.92)	--	-.918 (-1.56)
Command-Control Policy	--	-.970 (-2.41)	-.280 (-0.400)
Change in Price	-1.750 (1.98)	-1.60 (-1.81)	-1.66 (-1.86)
Price * Information	2.373 (3.26)	--	1.48 (0.88)
Price* Command-Control	--	2.89 (2.17)	1.56 (0.57)
<i>Bureaucratic Factors</i>			
Public Health Expend. (% of Health Expend)	-7.96 (-1.67)	-9.09 (-1.88)	-8.42 (-1.76)
<i>Industry-Political Factors</i>			
Pluralist Institutions	1.05 (2.83)	.847 (2.29)	1.02 (2.72)
<i>Robust Contextual Factors</i>			
Habit-Persistence	.894 (33.92)	.890 (32.66)	.890 (32.91)
Constant	13.34 (3.04)	15.01 (3.32)	14.10 (3.15)
R-squared	.86	.86	.86
Significance of IPS W[t-bar] ^b	.070	.074	.075

TABLE 7 Continued

	Model 1 Information Policy	Model 2 Command-Control Policy	Model 3 Combined
$P > X^2$.000	.000	.000
ρ (autocorrelation coefficient)	-.119	-.112	-.117
N	406	406	406
Dependent variable: Annual Per Capita Cigarette Consumption (Packs) for each country, 1970-2000. Information and Command-Control policy indicators are lagged one year.			
A Prais-Winsten procedure is used to correct for residual autocorrelation. Standard errors are panel corrected and robust to heteroskedasticity and unit correlation. The numbers in parentheses are Z statistics.			
^a Im-Pesaran-Shin test for residual stationarity. A significant t-bar statistic indicates stationarity.			

For Model 1, as expected the impact of price and information instruments are negative. The price coefficient (-1.75) indicates that a price change of one dollar per pack is associated with a reduction in per capita consumption of 1.75 packs.¹⁷ The lagged dependent variable implies that a price increase will have impacts into the future, at gradually declining rates. The total impact of a one dollar increase in the price of a pack of cigarettes is 16.51 packs per person. This is a large amount of tobacco and it indicates that aggressive use of price policy may be a successful way to dramatically reduce consumption.

Policy instruments which propagate negative information on the harmful effects of tobacco also reduce consumption. As governments increase their adoption of

¹⁷ The dependent variable is not logged, so one-unit interpretation is appropriate. Diagnostic tests confirm the absence of any aberrant outliers which might have called for taking the natural log of several variables.

information policy instruments, consumption decreases by 1.13 packs per person. The interaction between changes in price and the adoption of information policy is significant and in the expected direction. Because the interaction term for combined policy is in the model, the coefficient for price is interpreted as the relationship before information policies are added to existing regulation.

For example, as information policies are adopted, the effectiveness of price as a disincentive diminishes ($-1.75 + 2.37 = 0.62$).¹⁸ This implies that as information policies are added to the regulatory fabric, price increases need to become quite large to have the same impact as before.

Also, the addictive nature of tobacco generates a large positive coefficient (.894) for the lagged consumption variable: habit persistence. This is consistent with expectations associated with the robust inelasticity of addictive commodities. Despite this, a one percent increase in public health expenditures reduces consumption by approximately eight packs per person, annually, even when controlling for industry efforts to use pluralist institutions to stabilize (even increase) demand for tobacco products. More pluralist policymaking processes are associated with an increase in tobacco consumption of approximately one pack per person, annually.

Model 2 reports similar findings. Past consumption remains inelastic (.89) and price and command-control policies reduce consumption. A one dollar change in price is associated with a decrease of one and a half packs of cigarettes per person, annually. The

¹⁸ While this demonstrates how price incentives diminish, the positive .62 cannot be interpreted as being correlated with an increase in consumption, since the value passes through zero.

magnitude of this impact is diminished as command-control policies influence less-addicted smokers, leaving only those more highly addicted ($-1.60 + 2.89 = 1.29$). The independent effect of command-control policies, after considering price changes and other factors remains notable. As government adds command-control policies to the regulatory milieu, consumption decreases by approximately one pack per person. The total impact of command-control policies (dividing the command-control slope by one minus the slope of the lagged dependent variable) is a long-run reduction of approximately nine packs per person. Expenditures by the public health bureaucracy also significantly contribute to a decline in cigarette consumption ($b = -9.09$), even when taking into consideration increases in consumption due to industry efforts to constrain regulatory efforts (pluralism $b = .847$).

In Model 3, the most significant determinants of consumption are price policy, public health expenditures, past consumption and pluralist institutions. Command-control and information policies (and their interactions with price) become insignificant. This could be because the combined model is highly collinear. The issue of collinearity among non-price policies provides the first indication that command-control and information policies may not be as distinct as argued previously. I propose a solution for this issue in the next section that enables me to continue with exploring an instrumental theory of policy effectiveness.

In sum, Table 7 reports evidence in support of theoretically derived hypotheses. In separate models of consumption, non-price policies are linked to reductions in consumption. In these instances, as expected, combinations of these policies with price

policy diminish their independent effects due to demand-characteristics of the smoking population – which range from highly addicted to not addicted. There is no evidence that non-price policies reduce consumption when they are placed in a single model. Price policies, bureaucratic factors, industry-political factors and habit-persistence remain robust in reducing consumption in the combined context.

Further Analysis

Up to this point I have made the case that information and command-control policies work differently in how they affect consumption and are therefore distinct. While these instruments are coded separately, in reality there are instances of multiple instruments being adopted within one piece of legislation, making it more difficult to determine their distinctive impact on consumption. To deal with this problem I develop a policy-bundle measure of non-price policies. This collective measure still captures collective behavioral attributes, but prevents any finer assessment of individual non-price policies in reducing consumption. This strategy allows me to continue applying an instrumental perspective; one that distinguishes between price and non-price policies, rather than among non-price policies.

When non-price policies are correlated with one another because of the issue of simultaneous adoption, factor analysis can be used to develop a collective measure for empirical analysis. In Chapter III I performed factor analysis using oblique rotation, which assumes correlation among items. From this analysis I derive a measure for non-price policy bundles. This measure captures the scope of non-price policy instruments

used each year in each country. Similar data-reduction strategies have been used in the social-regulation literature (Durant and Legge 1993; Haider-Markel 1998). As the scope of non-price tobacco interventions increases, policy outcomes are expected to respond favorably: consumption is expected to decline (*Hypothesis 9*).

This expectation, however, cannot be considered apart from pervasive strategies used by the tobacco industry, which serve to protect and expand demand of their products. Whether the United States, Canada, or across Europe, one of the most popular strategies used by the tobacco industry is to convince governments of their position within the larger state economy. Primary attention is given to the macro contribution of the commodity by way of production and manufacturing (Studlar 2002). This strategy has been successful during the time period under investigation. In fact, not only have some governments subscribed to economic-contribution arguments, many have historically subsidized the efforts of the tobacco industry. I expect policy efforts to be less effective at curbing consumption when controlling for the contribution of tobacco manufacturing to the larger economy (*Hypothesis 10*).

Table 8 reports findings for the initial analysis on policy scope and policy performance. Model 1 demonstrates the independent influence of price and non-price policies in reducing consumption. As the scope of non-price policies increases, consumption declines at a rate of approximately one pack per person. The full impact of additional non-price policies overtime contributes to a reduction in smoking by almost ten packs per capita. Habit-persistence and interest-group pluralism remain associated

TABLE 8 The Effect of Policy Scope on Tobacco Consumption in the European Union, 1970-2000

Independent Variables	Model 1 Non-Price Policy	Model 2 Non-Price*Price Policy
<i>Policy Instruments</i>		
Scope	-1.04 (-2.66)	1.50 (1.13)
Change in Price	-1.70 (-1.92)	-2.00 (-2.27)
Price * Scope		-1.22 (-2.06)
<i>Bureaucratic Factors</i>		
Public Health Expend. (% of Health Expend)	-8.87 (-1.89)	-10.26 (-2.23)
<i>Industry-Political Factors</i>		
Pluralist Institutions	.767 (2.12)	.703 (2.00)
<i>Robust Contextual Factors</i>		
Habit-Persistence	.892 (33.87)	.893 (34.04)
Constant	14.93 (3.44)	16.29 (3.78)
R-squared	.85	.86
Significance of IPS W[t-bar] ^b	.073	.071
P > X ²	.000	.000
ρ (autocorrelation coefficient)	-.104	-.118
N	406	406

Dependent variable: Annual Per Capita Cigarette Consumption (Packs) for each country, 1970-2000.
Scope variable lagged one year.

Sample is split around the mean of the percent value-added to national manufacturing made by tobacco.
The mean contribution is 16.21 percent.

TABLE 8 Continued.

A Prais-Winsten procedure is used to correct for residual autocorrelation. Standard errors are panel corrected and robust to heteroskedasticity and unit correlation. The numbers in parentheses are Z statistics.

^aIm-Pesaran-Shin test for residual stationarity. A significant t-bar statistic indicates stationarity.

with increases in consumption, while price-changes and public health expenditures continue to be related to decreases in consumption.

Model 2 reports findings when policy scope is interacted with price policy. The independent effect of non-price policies becomes insignificant. The impact of price policy when non-price policies are present cannot be determined since the main effect of policy scope is insignificant. Despite this, cigarette price, public health expenditures, pluralist interest group structures and addiction significantly influence consumption in expected ways.

Table 9 reports evidence on the impact of tobacco manufacturing on consumption. Non-price policies are not a significant factor in reducing consumption when controlling for the contribution of tobacco manufacturing to the larger economy. Price policies remain a powerful tool in reducing consumption. Support from the public health bureaucracy also continues to significantly impact consumption in a positive manner. Tobacco manufacturing, pluralist institutions and addiction lead to increases in consumption. Comparing these results to Table 8, there is no evidence suggesting that strategic positioning of the tobacco industry in the larger economy influences the

TABLE 9 The Effect of Policy Scope on Tobacco Consumption in the European Union when Tobacco Manufacturing is Considered, 1970-2000.

Independent Variables	
<i>Policy Instruments</i>	
Scope	1.32 (0.98)
Change in Price	-2.08 (-2.35)
Price* Scope	-1.10 (-1.83)
<i>Bureaucratic Factors</i>	
Public Health Expend. (% of Health Expend)	-9.22 (-2.02)
<i>Industry-Political Factors</i>	
Pluralist Institutions	.766 (2.18)
<i>Robust Contextual Factors</i>	
Habit-Persistence	.874 (29.98)
Tobacco Manufacturing	.146 (1.80)
Constant	14.58 (3.52)
R-squared	.86
Significance of IPS $W[t\text{-bar}]^b$.017
$P > X^2$.000
ρ (autocorrelation coefficient)	-.103
N	420

TABLE 9 Continued.

Dependent variable: Annual Per Capita Cigarette Consumption (Packs) for each country, 1970-2000.
 Scope variable lagged one year.

Sample is split around the mean of the percent value-added to national manufacturing made by tobacco.
 The mean contribution is 16.21 percent.

A Prais-Winsten procedure is used to correct for residual autocorrelation. Standard errors are panel corrected and robust to heteroskedasticity and unit correlation. The numbers in parentheses are Z statistics.

^aIm-Pesaran-Shin test for residual stationarity. A significant t-bar statistic indicates stationarity.

contribution of other robust factors in determining consumption outcomes. These results provide mixed evidence in support of the original hypothesis. Tobacco manufacturing does lead to an increase in consumption, but does not effect how policies, bureaucratic, industry-political, and robust contextual factors influence consumption.

Conclusion

Overall, I find mixed support for theoretically derived hypotheses. The most consistent findings are those coming from the policy environment. Implementation resources from the bureaucracy and structures guiding the way in which powerful groups engage the policymaking process are significant factors in reducing consumption. The magnitude effect of public health expenditures is notable. Across six models this variable contributes to a reduction in consumption in the range of four and twelve packs of cigarettes per capita. Across the lifetime of data under observation, the impact is 40-120 packs per capita annually. This is the largest impact of any variable across models.

The most effective strategy for controlling tobacco may be to increase the capacity of the bureaucracy to exercise its expertise in governing public health issues.

Another consistent finding is the role pluralist institutions play in promoting consumption. These institutions benefit the tobacco industry by allowing them the opportunity to engage the policy process in a way that limits regulation over their products. Public policies to control tobacco have been less successful across the models. While price policies consistently contribute to reducing consumption, the evidence for non-price policies is mixed. In some cases, non-price policies have an independent effect on consumption. In others, they drop out of significance. They also lessen the impact of price policy in some instances. In these cases, there is compelling evidence confirming Meier and Licari's (1998) formal postulate that combining policy instruments results in an overall impact less than the sum of their parts. This is the first study to investigate the postulate cross-nationally, and with consideration for the larger policy environment.

In the end, when comparing instruments, price policy outperforms non-price policy-bundles. The collective attributes of non-price policies are not enough to reduce consumption when controlling for other instruments and the larger policy and political environment. Finally, the unique characteristic of tobacco being addictive poses many challenges to governing public health through regulatory efforts. A model of policy effectiveness must consider such challenges when evaluating how policy outcomes respond to such efforts. When deciding if and how to regulate consumption, governments would do well to consider:

- the aggregate addiction of the target population,

- the capacity of public health bureaucracies to align efforts with policy agendas focused on improving public health,
- the extent to which pluralist institutions guide industry involvement in policymaking,
- whether information policy instruments are aimed at correcting information asymmetries associated with tobacco products,
- the extent to which command-control policies standardize regulatory efforts and create capacity for ensuring compliance,
- whether price and non-price policies are independently and jointly effective,
- the degree to which important actors in the policy environment strategically position themselves according to value-added contributions in matters important to the government, such as the economy.

The next step in the study involves a careful look at important political factors specific to the supranational arrangement of the European Union. Two important considerations are whether a policy mandate exists for governing public health at the European level, and the extent to which national governments have to adopt European Union legislation into their national laws and regulations regarding tobacco control. These two factors are considered important when comparing public policies in multilevel systems of governance, particularly with respect to tobacco control. *How do policy outcomes respond to regulatory efforts when elements of the supranational arrangement are accounted for?*

CHAPTER V

TOBACCO CONTROL AND SUPRANATIONAL GOVERNANCE

This chapter extends findings from chapter IV and considers how policy outcomes respond to policy efforts when taking into consideration attributes of Europeanization. Ultimately, this fits into my broad concern with how public policies can be conceived of as mechanisms of governance; how they help negotiate the evolving relationship between states and societies.

First I discuss how policy directives connect the supranational (EU) level of governance with member state policy efforts to control tobacco. This discussion is situated against a background of the general role of policy in the Europeanization process. Secondly, I explore the role of supranational mandates in governing policy outcomes at the national level. I empirically investigate whether supranational mandates have demonstrable effects on the variation of policies pursued across the European Union and tobacco consumption. Finally, I present findings and implications for European tobacco control specifically, and the role of supranational governance arrangements in the study of comparative public policy, generally.

Tobacco Control Directives and European Union

The European Union is one of the most significant laboratories of supranational, multilevel governance in modern history. In order to properly place tobacco control

research within the political literature on ‘Europe’ it is necessary to take into account two broad developments related to public policy within the European enterprise:

European integration and Europeanization. Europeanization is conceptually large and considers processes through which EU dynamics, whether political, economic or social, become part of the organizational logic of national politics and policymaking (Harmsen and Wilson, 2000).¹⁹ European integration is part of the Europeanization process and is more narrowly focused on processes of “policy formulation by a wide range of actors -- representative of governmental as well as non-governmental entities, of member states as well as of the European Union – engaged in decision making at the European Union level. Such decision making, including both EU level processes and its outcomes, generate the economic, institutional, and ideational forces for change in member-states’ policies, practices, and politics” (Schmidt, 2001, p. 20). Theories of political integration predict that policymaking at the EU level increases the probability of achieving policy goals – goals designed to benefit EU member states and their citizens.

Generally, public policies are inextricably bound with governmental and institutional bodies in which they are formulated, implemented and evaluated. In multilevel systems of governance, where delegation of authority exists between levels of government, this truism comes to life, as does its complexity. For example, the European level of policymaking – the identification of relevant actors, sources of power and

¹⁹ The importance of this process has become more considerable as scholars “of a wide range of government activities, including industrial, regional, social, and environmental policies, have found they can no longer understand [national] processes and [policy] outcomes that interest them without addressing the role of the European Union.” (Pierson, 1996, p. 130).

influence, and capacity to exercise power – is broadly envisaged within a larger context of positive delegation of authority running between Brussels and member states. These rules of the game, which extend into and from various political entities make patterns of influence in the policy process difficult to disentangle, and brings to mind a policy-quagmire.

Within the European Union, there exists much debate on the question of supranational influence on member state functioning. Theories of integration, such as intergovernmentalism and neofunctionalism, are at the heart of understanding the impact of political integration and predict that supranational policymaking will increase the probability of achieving policy goals salient to Europe. On the one hand, intergovernmentalism suggests that public policy coming from the supranational level reflects state-centric diplomacy whereby member states are super-sovereign and seek to maximize their own advantage (Garrett, 1992; Moravcsik, 1993; Pierson, 1996). From this perspective, policy outcomes are a consequence of member state preferences, which are more likely to be heavily weighted and reflected in European directives, orders and legislation.

This is quite different from policy outcomes predicted by the neofunctionalist theoretical perspective. Rather than a member-state centric influence, neofunctionalists attribute greater autonomy to supranational actors who often act independently in the policymaking process – as in, for example, the Commission or the European Court of Justice. In this case the scope of member state authority appears far more circumscribed,

and “both the interventions of other [non-state] actors and the cumulative constraints of rule-based governance more considerable” (Pierson, 1996, 131).

Supranational directives reflect combined notions of intergovernmentalism and neofunctionalism, and have been the most common instrument of tobacco control at the EU-level. Supranational directives are “binding recommendations upon each member state to which they are addressed, but leave to national authorities the choice of form and methods” (Nugent, 1999, p. 246). Directives communicate policy principles that member states must achieve (*neofunctionalism*), but can pursue by appropriate means under their respective national, constitutional, administrative and legal systems (*intergovernmentalism*) (Nugent, 1999). Directives are also an instrument of policy harmonization, which is a major goal and characteristic of Europeanization. This supranational course of action is traditionally accepted as a means for increasing the probability of achieving desired policy outcomes; and furthermore that the European Union enterprise provides some value-added function to what member-states can achieve on their own, or in intergovernmental, regional, or dyadic policy exchanges.

During the time under study, 1970-2000, there were six major tobacco control directives adopted by the European Union dealing with labeling, advertising, ingredients, and taxation (Table 10). These directives were concerned with harmonization and approximation of laws and practices of tobacco control activity across the Union. Therefore, they were applicable to all member states. All EU directives considered in this study were adopted between 1989-1998, when supranational progress in the arena of

TABLE 10 Supranational Directives for Tobacco Control Adopted by European Union

Directive/Year	Policy Instrument	
	<u>Command-Control</u>	<u>Information</u>
552/1989	<i>Advertising:</i> Regulation constraining the use of television advertising for tobacco products	
622/1989	<i>Ingredients:</i> Tar and nicotine yields must be measured and verified	<i>Labeling:</i> Requires all packs of cigarettes to carry a health warning
239/1990	<i>Ingredients:</i> Sets new maximum tar yield of cigarettes	
41/1992	<i>Sales:</i> Restriction on sales should reflect a priority of health protection, but not impede the Internal Market.	<i>Labeling:</i> Makes previous health warnings more Specific
79/1992	<i>Taxation:</i> Requires a specific level of excise duty be charged for tobacco products.	
43/1998	<i>Advertising:</i> Bans tobacco advertising in the EU	

Source: Gilmore and McKee (2004).

public health was on the rise (Gilmore and McKee, 2004). However, the pace slowed down considerably once a mood of caution about the pace of change in Europe developed and the principle of subsidiarity was implemented in 1992 (Gilmore and McKee, 2004). This principle clarifies the role of supranational governance in areas of policy competence better served by member-state action (Nugent, 1999). The Treaty Establishing the European Community (TEC) holds that: “The Community shall act within the limits of the powers conferred upon it by this Treaty and of the objectives assigned to it therein. In areas which do not fall within its exclusive competence, the Community shall take action, in accordance with the principle of subsidiarity, only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be better achieved by the Community. Any action by the Community shall not go beyond what is necessary to achieve the objectives of this Treaty” (Article 3b, TEC).

This article simply implies policies should be decided at the national, regional or local level, whenever possible (Nugent, 1999). Before the principle of subsidiarity was in place (pre-1992), a number of European Council directives were adopted to control tobacco. Between 1992 and 2000 only one directive was passed (EurLex, 2005). The first major European Council directive relevant to existing member states was enacted in October 1989. This directive prohibits tobacco advertising on television by controlling, more strictly, the promotion and production of television programs. It specifically prohibits the representation of misleading information of tobacco products and services to potential consumers, while also discouraging behavior prejudicial to consumer health

(Eurlex, 2005). Member states are required to pursue rules and procedures which ensure these standards of regulation.

The second major directive shifted attention towards regulating ingredients and labeling of tobacco products. The main goal of the directive is to uphold a high level of health protection by reducing the harm done to health by tobacco addiction. In order to achieve this policy aim, tar and nicotine yields are required to be measured and verified according to international standardization (ISO) methods (EurLex, 2005). These yields are required to appear on cigarette packs along with general warnings of health risks of tobacco consumption. This directive imposes a community-wide requirement that all packs of tobacco products carry the general warning, “tobacco seriously damages health” (WHO, 2004). Health warnings are to be printed in the official language(s) of the country of final marketing, located on the most visible surface, alternated with more specific warnings (EurLex, 2005).

Supranational product regulation began in 1990 with a directive intended to establish new maximum tar yields of cigarettes. The tar yield of cigarettes marketed in member states is not to exceed 15 mg per cigarette (through 1992) and 12 mg per cigarette (through 1997). Measurement and verification of this ingredient is to be managed according to ISO standards (EurLex, 2005).

In 1992 a directive was adopted requiring cigarette packs to carry more specific warnings. Compulsory rotation of health warnings is instituted and member states are strongly encouraged to attribute and indicate a source of authority for health warnings (for example, a surgeons’ general or the Department of Public Health, etc). While the

restriction of tobacco sales are supported in this directive, the Council is careful to protect against government action which may impede functioning of the internal market (EurLex, 2005). Finally, this directive encourages member states to couple their regulatory efforts with health education programs during years of compulsory education and with general public information campaigns of the harm of tobacco consumption (EurLex, 2005).

European Union regulation of tobacco by means of taxation began in 1992. This directive requires member states to impose minimum consumption taxes that comprises: specific excise duties, a proportional excise duty calculated on the basis of the maximum retail selling price, and a VAT (value-added tax) proportional to the retail selling price. The overall tax rate is to be at least 57% of the retail selling price for cigarettes in highest demand.

The most controversial supranational directive related to tobacco advertising was implemented in 1998. Initially, this directive banned tobacco advertising in all 15 EU member states, covering all forms of advertising apart from television advertising already covered by previous directives. Any existing sponsorship of events or activities was only allowed to continue for a period of eight years, ending no later than October 2006. Though not discussed extensively, the European Court of Justice overturned this directive and the Council implemented less severe advertising bans (Official Journal, 152).

Finally, there are additional directives related to tobacco control beyond the time frame of this project. However, these directives are important to the discussion of the

European Union involvement with voluntary, international agreements on tobacco control. These are discussed in the next chapter on the future of tobacco control research in Europe.

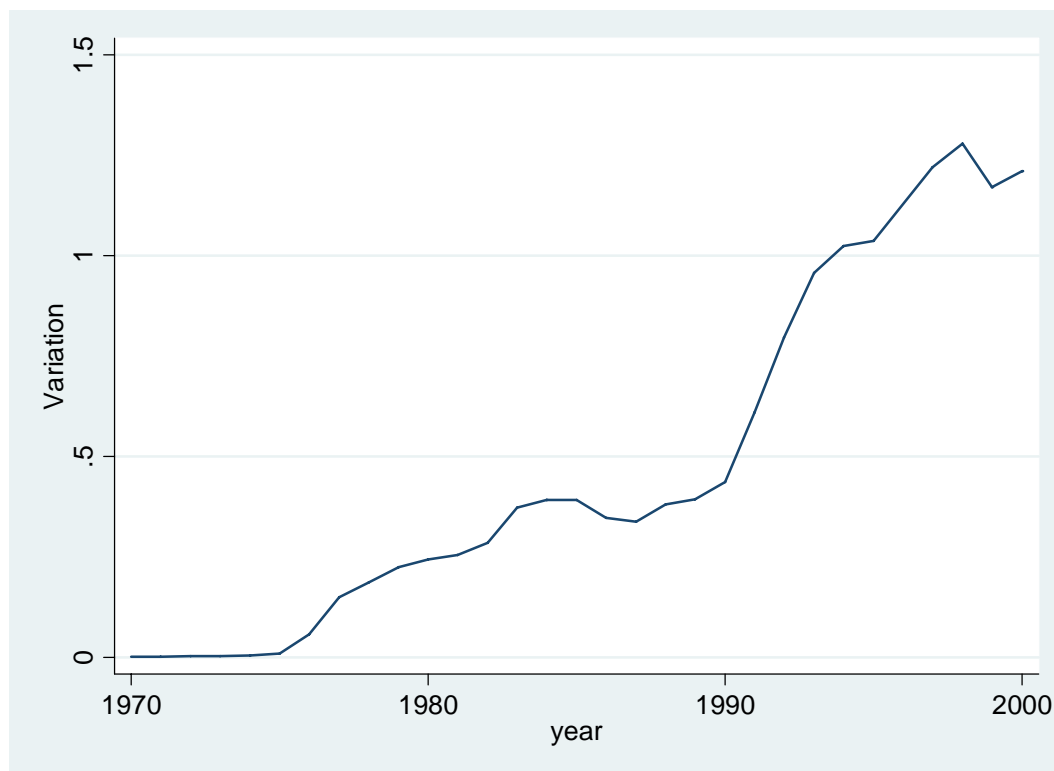
The question of how to gauge the impact of these directives is important. There has only been one quantitative study of the impact of EU directives on tobacco consumption (see Licari, 2000). In this paper, directives are considered as separate policy interventions from national policy interventions to regulate consumption. This method is not consistent with how directives are theoretically applied in the context of multilevel governance. Directives are general policies designed to shape national-specific strategies to achieving specified policy goals (Nugent, 1999). Perhaps a better way to gauge the role played by these directives in European tobacco control is to determine whether they assist in harmonizing policies across member states.²⁰ Two approaches are taken to demonstrate whether harmonization may be occurring. First, I gather data on the variation of non-price policy bundles across member states, annually. Average policy variation is graphed over time with markers indicating the integration of supranational directives. Because of simultaneous adoption issues, I cannot make a precise determination of whether certain types of non-price policies are converging versus others. But, I can capture overall tendencies. I expect supranational directives to lead to the harmonization of tobacco control policies across member states overtime. Secondly, I apply this method to cigarette price over time. I expect variation to narrow after the adoption of supranational directives targeting price. Together these two items

²⁰ Given data limitations I cannot construct a measure of harmonization.

produce evidence of harmonization, but do not offer a reliable measure of harmonization which could be used in an empirical test of consumption. *Proposition 6* in Chapter II, therefore, cannot be fully tested. This proposition states that supranational directives may lead to harmonization of tobacco control policies across member states and consumption is likely to decline in those countries where efficiency-gains are realized through the harmonization process.

Figure 7 reports the average variation of non-price policies implemented by European countries from 1970-2000. Because the variation in non-price policies is based on the mean level of policy, caution has to be exercised when making claims about convergence. Therefore, I add additional evidence from the variation of price policy in Figure 8. Figure 7 reports a gradual overall increase in the average variation of non-price policies across member states. This confirms that a great of non-price policies are adjusted for nation-specific concerns. This does not mean that harmonization is nonexistent. From 1989-1992 there is a major increase, followed by a slower rate of increase. The latent effect is consistent with the assumption that it takes some time to harmonize policies once directives are adopted. The second indication of harmonization occurs between 1996-1999, when policy variation declines.

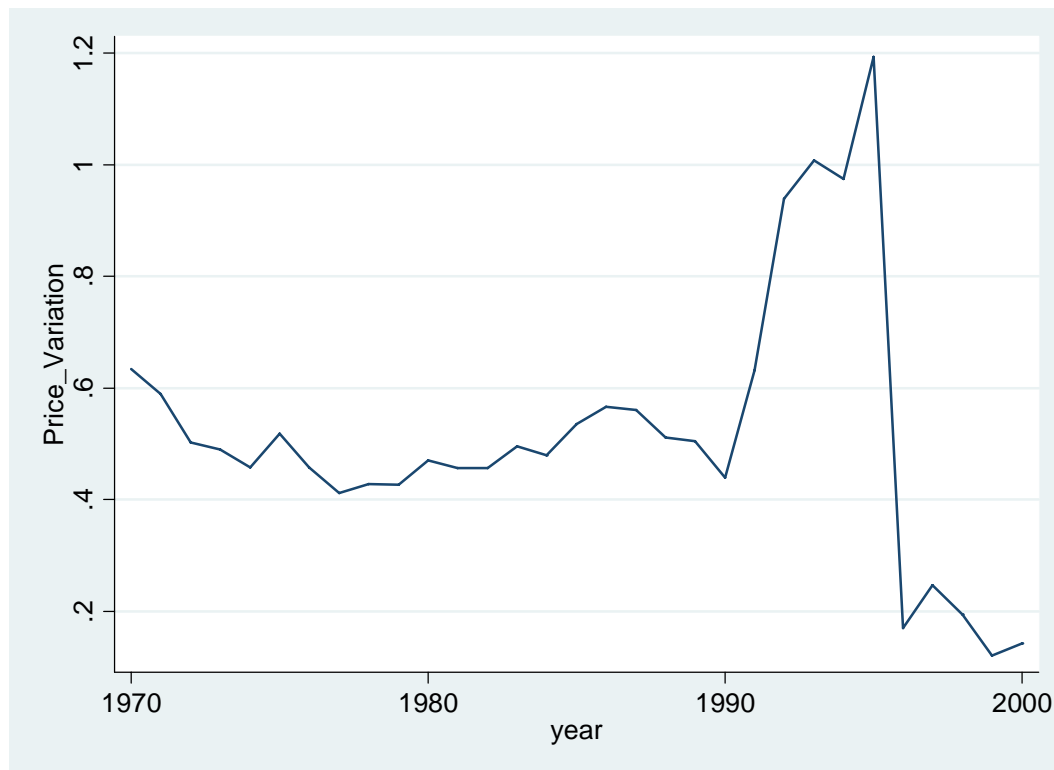
FIGURE 7: Variation of Non-Price Policies in Europe: 1970 - 2000



Source: Shafey et al, 2003.

Figure 8 reports evidence of the average variation in the price of cigarettes over time. Cigarette price is the best proxy for government policies which target taxation of addictive commodities. Large increases in the early 1990s are mostly driven by several countries that began aggressively taxing cigarettes, such as the United Kingdom. There is evidence of harmonization from 1994-2000, when variation in price declines. Across both accounts there is evidence suggesting policy harmonization is occurring from the

FIGURE 8: Variation in Price Policy in Europe: 1970 – 2000



Source: Shafey et al, 2003

mid and late 1990s to 2000. A longer time series would help support this claim, but that option is not possible given data limitations.

In the next section I contribute more evidence for how Europe matters in controlling tobacco. Specifically, I focus on the role of supranational mandates play in reducing consumption. Supranational mandates have been largely overlooked in policy-performance studies.

Mandate for European Health Governance: Treaty on European Union

At the European Union level, there is much concern over the continued consumption of tobacco products, especially manufactured cigarettes. This is due to increasing numbers of health-related problems associated with consumption, as well as the incidence of consumption itself. Over forty percent of EU citizens continue to consume tobacco products, mainly through smoking cigarettes (Economic and Social Committee Report, 2001). While the incidence of smoking has been in decline for a number of decades, the rate of decline has fallen considerably in recent decades. From the view of the Community, the EU is in position to facilitate a more comprehensive overall strategy to combat smoking (Aspect Consortium, 2004). Therefore, the Commission works alongside member states to bring tobacco policy into harmonization, hopefully improving the epidemic by contributing to overall decreases in tobacco consumption.

Ultimately, policy output the European multilevel system of governance is the result of complex nested routines (Nugent, 1999). These nested routines are governed by a system of positive, legal-political authority. The positive legal authority by which the EU controls tobacco comes from the Maastricht Treaty (or, Treaty on European Union). In 1992, the TEU was drafted after the relaunching of integration through the Single European Market program. There was a “growing acceptance of the need for a social-equity dimension that would offset some of the liberal market/deregulatory implications of the single market” (Nugent, 1999, p. 60). Most member states were interested in deepening integration efforts by adding a social dimension to the existing economic

mission. The TEU created the ‘European Union’ based on three pillars: the European Communities, a Common Foreign and Security Policy, and Cooperation in the Fields of Justice and Home Affairs (Nugent, 1999). Within the first pillar, there were major developments in two areas: EU institutional changes, and policy changes. Institutional revisions helped improve various supranational structures and decision-making processes by making them more efficient and democratic in nature (Nugent, 1999). On the policy side, the European Union’s policy competence was extended to include the management of social policy, including several public health matters.

Article 152 within the first pillar states that, “a high level of human health protection shall be ensured in the definition and implementation of all Community policies and activities” (EurLex, 2005). More specifically, Article 152 “provides that Community action shall be directed towards improving public health, preventing human illness and diseases, and obviating sources of danger to human health. Such action shall cover the fight against the major health scourges, by promoting research into their causes, their transmission and their prevention, as well as health information and education” (EurLex, 2005).

In its response to new health provisions in the TEU, the Commission established a framework for action in the field of public health to ensure compliance with supranational law (EurLex, 2005). Tobacco control is integrated into three portions of this framework: promotion of health, education and training; curbing the cancer epidemic; and, prevention of pollution-related diseases. Mobilization of government action in these arenas is expected to remedy, in part, the scale of the problem of the

damage to health from tobacco consumption. The Commission response calls for coordination among member states' policies and programs towards ensuring a high level of human health protection. Additionally, the Commission reserves the obligation (by law) to make any useful initiative to promote coordination, including developing evaluative criteria, which may compel compliance (EurLex, 2005).

Actions taken in the TEU, European Community policies represented in the first pillar, and the Commission's framework for coordinated action establish a supranational policy mandate. This mandate establishes incentives for member state compliance of both current directives which are part of national legislative action on tobacco and for other national policies currently in force. Additionally, the harmonization effect of supranational policy mandates may create efficiency-gains in member state-efforts to achieve policy goals. For these reasons, I contend that supranational mandates represent a policy-feature of European integration which is overlooked in its ability to stimulate or dampen the effectiveness of government action at the member state level.

By creating a larger macro-incentive policy context, there may also be implications for factors outside the scope of tobacco policy to influence tobacco consumption across the Union. For example, the previous chapter presented evidence of the following factors contributing to reduced cigarette consumption: robust contextual factors, pluralist interest group structures, bureaucratic factors, policy scope, and economic factors. Does the establishment of a supranational policy mandate have implications for if and how these factors influence tobacco consumption?

Empirical Investigation of a Public Health Mandate

To evaluate whether supranational policy mandates influence the effectiveness of government action to control tobacco consumption across member states, the comparative model of tobacco control effectiveness from Chapter IV is employed:

$$O = f(\text{Price-Policy}, \quad [9]$$

- Cost of tobacco, tobacco taxation

Non-Price Policies,

- Policy-bundle of all non-price policies

Robust Contextual Factors,

- Habit Persistence, Addiction

Policy Environment,

- Bureaucratic Factors
- Industry Factors

Measures of these factors follow the previous chapter. The dependent variable, O , is a measure of cigarette consumption: packs of cigarettes per capita consumed annually in each member state (European Health For All Database, 2004). Tobacco taxation is reflected in the real price of cigarettes. The main indicator of price policy is the price of cigarettes per pack (US = 1990) (OECD, 2002). Non-price policies are included as the factor score of all non-price policy instruments: policy scope in a given year. Habit persistence is captured with an autoregressive measure of cigarette

consumption, lagged from the previous years' consumption level. Bureaucratic capacity to assist in curbing consumption is measured with public health expenditures, as a percentage of general government outlay for health (OECD, 2003).

Lijphart's (1997) scores for interest group pluralism provide a measure for how institutions structure the pattern of influence of organized groups like the tobacco industry. The measure ranges from zero, pure corporatism, to four, pure pluralism. To account for one influence of Europe in curbing consumption by creating a pervasive incentive-context for member state compliance, a measure of supranational policy mandate is added to the model. This variable takes on the value of zero before the ratification of the Treaty on European Union and a value of one in the post-ratification period.²¹

The model is tested on a pooled dataset of 14 European Union member states, 1970-2000.²² While chow tests support poolability, heteroskedasticity is expected given differing variances of variables for subsets of countries. In order to constrain any bias which may result from this occurrence, OLS models are estimated with panel-corrected standard errors (Beck and Katz, 2004). Appropriate action is taken to achieve stationarity in those series where it is likely to arise. Model residuals are tested for stationarity, as well, using the Im-Pesaran-Shin test.

²¹ Denmark, France and Germany did not officially ratify the treaty, by way of referendum, until 1993. However, member state elites in each country continued operating 'as if' the treaty were in force (Nugent, 1999).

²² This is consistent with the previous empirical chapter: drawn from the EU15. Luxemborg is not included due to data limitations.

Hypotheses and Expectations

As in the previous chapter, cigarette consumption is expected to decrease when price for tobacco rises, policy scope increases, and public health expenditures rise. Consumption is expected to increase when demand for tobacco in the previous year remains inelastic and when the interest group structure (pluralist) favors tobacco industry efforts to divert policies aimed at reducing demand for their products (see *Hypotheses 1-9* in Chapter IV). Incorporating policy-features of European integration allows for consideration of how effective these factors remain at influencing consumption, when operating in a multilevel system of governance:

Hypothesis 11: The presence of a supranational policy mandate for public health and tobacco control at the EU level magnifies the impact policy scope, price and bureaucratic factors have on consumption, while diminishing the impact of habit-persistence and structures which support the tobacco industry.

This hypothesis is derived from *Proposition 5* in Chapter II which states that consumption is likely to decline when national efforts to control consumption occur within a supranational context of compliance and commitment to tobacco control, established through policy mandates. *Proposition 6* which states that supranational mandates provide a context of compliance and commitment which gives rise to improvements in member state policy performance.

Evidence

Table 11 presents findings for the expectation that supranational policy mandates may add a more nuanced notion of policy effectiveness within multilevel governance arrangements. Generally, whether a supranational policy mandate is in force, past consumption continues to be the leading determinant of current consumption. Cigarette price and public health expenditures also significantly contribute to reductions in consumption. Pluralist interest group structures contribute to higher consumption rates, while the influence of policy-scope depends on whether a SPM is in force.

A more careful comparison of Model 1 and Model 2 uncovers several noteworthy magnitude- effects. First, policy-scope significantly decreases consumption, when there is a context of supranational commitment to public health and tobacco control. There is a statistical difference between coefficients of policy-scope in each model. This finding concurs with the expectation that supranational policy mandates may activate and/or reinforce member-state implementation and compliance efforts associated with both recent and seasoned legislative action on tobacco control. This result, however, cannot be theoretically confined solely to policy-scope; supranational mandates work through numerous institutions at the member state level, acting as a pervasive agent of governance.

For example, compare the statistically larger magnitude-effect of public health expenditures on decreasing consumption, from Model 1 to Model 2. This difference lends empirical support to how one goal of the public health mandate for tobacco control

TABLE 11 The Effect of Policy Scope and Policy Environment Factors on Tobacco Consumption in the European Union when a Supranational Policy Mandate for Tobacco Control is in Force, 1970-2000

<i>Supranational Policy Mandate</i>	Model 1 (not In-Force)	Model 2 (In-Force)
Independent Variables		
<i>Policy Instruments</i>		
Scope	-.006 (-0.09)	-.244 (-2.29)
Change in Price	-4.96 (-2.23)	-2.31 (-2.56)
Price * Scope	1.56 (0.57)	1.48 (0.88)
<i>Bureaucratic Factors</i>		
Public Health Expend. (% of Health Expend)	-6.95 (2.03)	-38.52 (-2.10)
<i>Industry-Political Factors</i>		
Pluralist Institutions	.515 (1.63)	2.08 (2.33)
<i>Robust Contextual Factors</i>		
Habit-Persistence	.930 (45.18)	.874 (30.47)
Constant	11.22 (3.09)	51.26 (2.90)
R-squared	.90	.78
Significance of IPS W[t-bar] ^b	.003	.038
P > X ²	.000	.000
ρ (autocorrelation coefficient)	-.070	-.042
N	294	126

Dependent variable: Annual Per Capita Cigarette Consumption (Packs) for each country, 1970-2000.
Scope variable lagged one year.

Table 11 Continued.

Sample is split around the mean of the percent value-added to national manufacturing made by tobacco. The mean contribution is 16.21 percent.

A Prais-Winsten procedure is used to correct for residual autocorrelation. Standard errors are panel corrected and robust to heteroskedasticity and unit correlation. The numbers in parentheses are Z statistics.

^aIm-Pesaran-Shin test for residual stationarity. A significant t-bar statistic indicates stationarity.

(increasing comprehensive capacity to combat the tobacco epidemic) may be linked to improved outcomes (decreased consumption).²³

Past consumption and cigarette price are not statistically different across Model 1 and Model 2. Perhaps the magnitude-effect of these factors simply remains high no matter what additional EU factors are taken into account; they remain robust to policy-features present in a multilevel context.

Finally, caution is warranted when a sample is divided. There are trade-offs to inferencing capability when the full-sample is split according to a particular factor – in this case whether there is a supranational mandate in force. For example, in the previous chapter there is robust evidence that the scope of policy in force at the national level is a significant determinant of reduced consumption of cigarettes. In Model 1 (Table 10), evidence suggests that this effect disappears absent from a context where there is a supranational mandate for public health and tobacco control. These findings are not at odds, they simply reflect the possibility that the influence of policy scope on

²³ This observation engenders additional interest in how these two factors might link together (more descriptively) by way of particular programs, initiatives, educational campaigns, intergovernmental grants, etc.

consumption may be obscured by the sample-split. As such, these findings come with the caveat that more data points on the post-TEU side of policy context may allow for this statistical relationship to resurface. This evidence may seem superficial if it is not considered a portion of a larger exploration on how Europe matters in the effort to control tobacco. The two approaches taken in this chapter represent a starting point for studying what could be a productive future enterprise exploring additional supranational dimensions of tobacco control.

Discussion and Summary

Shifting the traditional focus of the policy discussion from institutional (input-side) matters towards post-decisional policy affairs allows for assessing how policy outcomes may respond to national regulatory efforts when elements of Europeanization are accounted for. This approach to evaluating whether and how Europe matters to policy effectiveness in a setting of multilevel governance contributes to the undeveloped discourse in comparative public policy over tobacco control in European Union. As it concerns tobacco control, member-state policies should be evaluated alongside supranational mandates which create a context of compliance, and allow for efficiency gains in achieving policy goals by way of policy harmonization.

In this chapter, I take a careful look at how two particular factors specific to the supranational arrangement of the European Union might influence policy outcomes: EU directives aimed at controlling tobacco, and the presence of a supranational policy mandate for public health and tobacco control. For the first factor, I only present

evidence of policy harmonization. I cannot test the link between harmonization and outcomes due to data limitations. However, I suggest theoretically how both factors are relevant to the success of community-wide tobacco control. Finally, overall evidence, evidence supports a framework and method for thinking about the role of different supranational governance mechanisms in the study of comparative public policy in laboratories of multilevel governance.

The next step in the study involves bringing together arguments and evidence presented throughout previous chapters in an effort to offer substantive and theoretical conclusions, discuss the future of tobacco control in the EU, and articulate the contribution of this project to the study of comparative public policy and the general role of policy in connecting states and societies within evolving systems of democratic governance.

CHAPTER VI

CONCLUSION

A General Model of Comparative Public Policy

The tobacco epidemic is politically, socially, and economically salient in the European Union and around the world. The purpose of this project was to examine the politics of tobacco, expressed through public policy, in order to understand why certain interventions were better than others in curbing this epidemic. An instrumental theory of policy effectiveness was developed to help explain this phenomena. This framework guided the identification of policy instruments across space and time, articulated common underlying notions of numerous policy efforts across member states, and made provisions for how factors in the policy environment and in the macro-political context of 'Europe' influenced policy performance.

Using this simplified theoretical perspective I was able to answer three important questions concerning policy effectiveness: 1) how can policy instruments be identified, categorized, and analyzed? 2) which factors in the policy environment are most important for distilling the effectiveness of individual and multiple policy efforts? and 3) how, and to what extent is policy performance contingent on factors associated with multilevel governance arrangements?

Three research approaches were useful for conceptual development of dependent and explanatory factors, as well as empirical model-development: substantive case study

of tobacco policy; quantitative historical analysis of tobacco policy across time; and, quantitative analysis of tobacco control across space. By emphasizing post-decisional policy consequences (or, policy outcomes), a contribution was made to previous research orientations in tobacco control which focus mainly on policy development, adoption and diffusion. In order to simplify this study of public policy, a unified model was developed and utilized across multiple chapters, drawing on an instrumental view of policy effectiveness:

$$O = f(\text{Policy}, \quad [10]$$

- Individual policy interventions
- Multiple policy instruments
- Scope of policy

Robust Contextual Factors,

- Qualitative information on relevant factors driven by policy arena

Policy Environment,

- Bureaucratic Factors
- Industry Factors
- Interest-group Factors
- Political Factors

Macro-Contextual Factors

- Multilevel governance factors

- Supranational mandates, international treaties)

This model provided a parsimonious framework of thinking about public policy and performance. The configuration in which the model is used depends on the context in which it is applied. However, this model is also a useful framework for future quantitative, qualitative and formal research in the field of public policy, especially in comparative context. Further research should explore different functional forms and contingencies, as well as possible connections between this model and others in public policy, especially in policy implementation and evaluation.

Instrumental Theory of Policy Effectiveness: Evidence

A number of propositions were introduced in the beginning of the study. Hypotheses were then derived and tested, empirically. I find support for a number of these hypotheses. First, price and non-price policies are individually linked to reductions in cigarette consumption. However, when used in combination, their independent effects are diminished due to the demand-characteristics of the smoking population, which ranges from highly addicted to not addicted. Increased bureaucratic capacity also improves consumption rates, while pluralist interest-group institutions, which favor the tobacco industry, lead to increases in consumption.

Simultaneous adoption of non-price tobacco policies requires a different strategy than expected. A measure of policy scope is developed that captures the collective attributes of non-price policies. When compared, price policies outperform non-price policy bundles, controlling for a number of factors in the environment.

Further analysis reveals that policy performance in the tobacco control arena cannot be considered apart from pervasive strategies used by the tobacco industry to position themselves as important contributors in the larger economy. As tobacco manufacturing increases, so does consumption, even when controlling for other policies and factors in the policy environment.

Policy performance of member state regulatory efforts were also expected to be subject to political factors specific to the supranational arrangement of the European Union. The Treaty on European Union (TEU) expanded the policy competency of the European Union to include a number of social-regulatory matters, including public health. A supranational policy mandate for public health and tobacco control was established within the first pillar of TEU, and was buttressed by the framework-response of the Commission to priorities articulated in the TEU. The harmonization effect of this policy mandate allowed for potential efficiency-gains to be realized in efforts by member states to achieve policy goals. It also established a super-state commitment to achieving tobacco control, of which a macro-incentive context of member state compliance was a part.

Implications for Future Tobacco Control in the European Union

Numerous legislative measures have been adopted to control the production, manufacturing and consumption of tobacco since 2000 at the EU level. In addition to using directives, the Commission is managing a Tobacco Fund. The Tobacco Fund is a community-wide grant program that supports the research and dissemination of

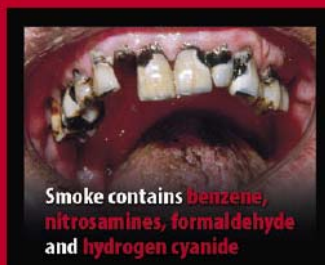
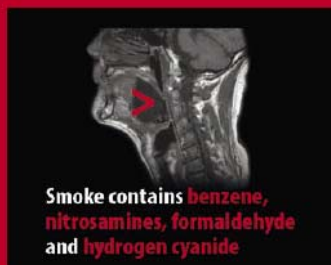
information of the harmful effects of tobacco consumption, especially through manufactured cigarettes, whether active or passive (ETS). Another objective of the Fund is to improve the relevance of language and images used for health warning, posted on tobacco products (Aspect Consortium, 2004). Figure 9 shows several warning labels recently accepted into circulation across the Union. They are indicative of the widening and deepening of certain policy instruments used to control tobacco consumption:

FIGURE 9 New European Union Labels for Tobacco Products



FIGURE 9 Continued.

Smoke contains benzene, nitrosamines, formaldehyde and hydrogen cyanide



Smoking when pregnant harms your baby



FIGURE 9 Continued.

Source: European Commission on Public Health (2006).

With support from the Tobacco Fund, advertisements and warning labels are developed by experts in commercial advertising and the medical profession. In order to implement the Fund's public health objectives at the member state level, a system of interaction is developed between the regulatory body which manages the Fund and national authorities and relevant third-sector parties (European Commission on Public Health, 2006).

Another instrument used to govern public health and control tobacco is supranational funding of international non-profit organizational networks, like the Euroepan Network for Smoking Prevention. ENSP is financed, in part, by the Commission and is tasked with coordinating activities of national coalitions, government officials, and professional experts specializing in smoking prevention and cessation (European Commission on Public Health, 2006). ENSP also serves in formal policymaking capacity by facilitating coherence among tobacco control policies at both national and European levels of governance. While the organization is governed by an elected board, the Commission is responsible for all management and coordination of the network.

Finally, the EU has become partner to the World Health Organization's Framework Convention of Tobacco Control. The FCTC is the first ever international treaty on public health. The treaty articulates a set of principles and subsequent actions for countries world-wide to act against death and disease caused by smoking (European Commission on Public Health, 2006). The EU took leadership in negotiating the treaty; and was among the first to see it ratified.

Each of these newly initiated policy instruments (the Tobacco Fund, co-optation of policy networks, and international cooperation) can be integrated into the general model above to improve understanding of policy performance, generally, and tobacco control, specifically, in the context of multilevel governance.

Finally, as the relationship between citizens and government evolves, this type of theoretical and empirical integration will become necessary, even common place, as

policy scholars recalibrate the meaning of 'policy' in negotiating governance between governments and societies and in facilitating democracy in the modern state.

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